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EDITORIAL—SOME HIGHLIGHTS

I General Economic Scene

State :

1976-1977 State Budget: With the replacement of government and the imposition of President's rule in the State on 1 February, the State Budget for 1976-77 was presented to and approved by the Lok Sabha in late March. Its main features are: (a) The Union Finance Minister started in effect with a balanced budget for the year, unlike the 1974-75 accounts which closed with a surplus of Rs. 4.93 crores and the 1975-76 revised budget estimates which are estimated to close with a deficit of Rs. 6.26 crores which would have been larger but for the State's V. D. Scheme. The revenue receipts are estimated at Rs. 575.63 crores and revenue expenditure at Rs. 587.95 crores, the capital receipts at Rs. 286.84 crores (+ Rs. 64 crores over the previous year) and capital expenditure Rs. 321.99 crores (+ Rs. 60 crores over the previous year), giving a total deficit (revenue and capital) of Rs. 47.47 crores. With the public account receipts of Rs. 43.75 crores, the deficit is Rs. 3.72 crores to which the opening minus balance (1975-76 deficit) of Rs. 6.26 crores should be added, giving the overall deficit of Rs. 9.98 crores. The additional proposed taxes while introducing the budget, was to bring an additional income of Rs. 9.00 crores, leaving a minus sum of Rs. 0.98 crores to be covered by better tax collection and economies. When the budget was finally adopted, tax concessions were made reducing income to Rs. 7 crores and increasing the deficit to Rs. 2.98 crores. The initial orthodox balanced budget has now been made somewhat complementary to the deliberately deficit Union budget. (b) The additional taxes and levies are: (i) increased motor vehicles tax on bus operators from Rs. 180 to Rs. 225, later reduced to Rs. 215 per seat per quarter for mofussil services and from Rs. 200 to Rs. 240 per seat for express services. (ii) restructured sales tax which extends the levy, ranging from 0.4 per cent to 0.7 per cent, to traders with a taxable turnover Rs. 3 lakhs instead of the previous Rs. 10 lakhs, which will add 10,000 traders to the 2 lakh assessors, with a prohibition against passing on this tax to the consumer. (iii) water cess of Rs. 12 per acre on lands using I class water sources and Rs. 10 per acre on lands using II class water sources, with no increase on III, IV and V class water resource users, such as those using rainfed tanks. This tax in part will make up the annual loss of Rs. 10 crores incurred on the State's irrigation, and is a much needed revision which has not taken place since 1963, (iv) special assessment of Rs. 25 later reduced to Rs. 20 per acre on grapes, sugarcane, plantains, cocoanut, betel and turmeric and Rs. 15 later reduced to Rs. 12.5 per acre on tobacco, chillies and irrigated cotton. Neither the enhanced water rate nor the special assessment on commercial crops will be taken into

account in collecting the local cess or surcharge. This tax on commercial crop is a small attempt to even the tax burden as between the industrial and agricultural sector. (c) on the other hand, note-books and pencils are exempted from the 4 per cent sales tax, the sales tax on cotton yarn sold outside the State will be reduced from 3 to 2 per cent, dry cells from 15 to 9 per cent, and passenger cars from 15 to 12 per cent. These are ante-recession measures aimed at reviving these industries. The total yield from the additional taxes will be Rs. 10.5 crores and the reduced yield from concessions will be Rs. 1.5 crores, giving a net Rs. 9 crores in income; (d) the Third Annual Plan is established at Rs. 201 crores, being an increase of Rs. 24 crores over the Rs. 177 crores negotiated by the previous government (see last issue p 125) due to increased allocations to agriculture and irrigation (Rs. 6.77 crores), power (Rs. 5 crores), industry (Rs. 1.05 crores), drinking water (Rs. 2.14 crores), slum clearance (Rs. 1.14 crores) and Harijan and backward classes (Rs. 2.44 crores). Power has largest allocation of Rs. 70.18 crores (Rs. 41 crores in the second Annual Plan), including Rs. 34.5 crores for the Tuticorin Thermal, Rs. 5 crores for Pandian-Pampuzha hydel. For irrigation Rs. 12.64 crores are provided to complete Marudhanadhi, Kodagarai, Vattamalaikarai Odai and Palar-Parandalar benefiting 17,230 acres of new and stabilising 13,000 acres. The Vagai channels are to be modernised and the Periyar improvement project presented to the World Bank. Rs. 4 crores are allotted for improvement old irrigation systems. For TIDCO Rs. 4.21 crores are provided. Non-formal Education centres are to be opened in each of 375 panchayat unions, Rs. 6.3 crores provided for family planning, Rs. 17.5 crores for Harijans and backward classes, Rs. 3.6 crores for slum improvement, Rs. 30.21 crores for road works. Rs. one crore is provided for study of the Krishna 15 TMC feet of drinking water project and Rs. 3 crores for Salem.

This is a good holding budget. It does not take any risks and can do little in the face of the larger constraints facing the State. One is the limit in its revenues potential consequent on the reintroduction of prohibition which involved a loss of Rs. 56 crores in 1974-75 when it was introduced increased to Rs. 80 crores today. Another constraint is the absence of any Union sector investment in the State over the past 7 years. In light of this the Salem project should be reactivated and in place of the Rs. 3 crores a minimum of Rs. 16 crores provided this year for finalising the technical collaboration plans, and orders placed now for the long lead to enable items, their manufacture and supply to be started. Another Union sector project which should be reactivated is the broadguage line project between Tirunelveli and Kanyakumari which should be quickly completed. A third central project is the second mine cut at Neyveli on which a decision should be taken now. In addition the start made on the further taxing agricultural incomes should be completed and the rural distribution net work expanded and strengthened. It is against such a larger background that there can be rapid economic growth and amelioration of poverty in the State.

Prices and Drought: The Government continues to take relief action in the drought stricken pockets of the districts of Ramanathapuram, Tirunelveli and Madurai. The cloud seeding programme for artificial rain over parts of Madurai and Ramanathapuram (see last issue p 126) was aban-

doned by the beginning of February, as there were no favourable cloud formations which could aid the *programme. In fact* the validity of this artificial rain making programme is under debate in the country, with the scientists in the Indian Meteorological Department taking the position that the programmes have really no effect. There is to be a conference in February/ March in Delhi to assess the results of the seeding experiments in the Red Hills and the Poondi catchment area. The government has a contract with the U. S. firm to continue the experiment over the Madurai, Coimbatore and Red Hills catchment area in the coming 3 years. Collectors of the 3 drought affected districts have been authorised to sanction relief works, including sinking and deepening wells. Prices in the State have declined in January. The decline has been rather sharp in prices of chillies, pulses, edible oils, coarse grains and jaggery. From mid February, rice supply to card holders in the State has been increased to 30 kg. per month. This benefits residents particularly of Madras, Coimbatore, Kanyakumari and the Nilgiris, where most of the card holders live. This increased supply reflects the comfortable rice position in the State. CSO's monthly abstract reports similar trends in State prices. Industrial workers prices show a 3 point (one per cent) decline in August, 1975, the first decline since February and March. The index number of consumer prices for agricultural workers shows a continuing decline by 16 points which is a near 4 per cent decline. The difference in levels between rural and urban prices (rural being some 20-25 per cent higher) persists however. In the case of inter-city prices for the first time in July 1975, Madras city prices are recorded at a higher level than those of Madurai (6 points lower) and Tiruchirapalli (2 points lower).

Power : The power supply situation in the State continued to be good in February. Neyveli's generation reached 500 MW in early February and averaged 450 MW, including 100 MW from the two oil fired units. This means that Neyveli would be able to supply 8 million units to the State grid till June end. At Ennore, the three major defects in the design of the boilers were set right by the BHEL engineering team, and the fifth unit of 110 MW was commissioned in early February. With the additional power supply from Neyveli, Ennore and Basin Bridge Plus the Kerala power, the power supply between February and June is estimated at 3,770 million units, including 400 MW from Kerala. Kerala's sale of 400 million units of Idikki surplus power for a three year period at an enhanced rate of 12.5 paise (3 paise above the previous rate) was the subject of an agreement between the two State governments at the end of January. By the end of January, the State has received 210 MW out of the committed 250 MW. The higher price is to compensate Kerala for the escalation in the cost of Idikki from Rs. 48 crores to Rs. 148 crores. The cost of the Tuticorin Thermal project was revised upward from Rs. 75 crores to Rs. 130 crores at the end of January, so that instead of three 200 MW units, two 210 MW units are to be erected to start with. The first 210 MW set is expected to be commissioned in late 1978. So far Rs. 9.5 crores have been spent on Tuticorin, and in 1975-76 Rs. 11 crores had been spent, and for 1976-77 out of the power allotment of Rs. 65.18 crores, Rs. 34.5 crores were for Tuticorin. Work is also under way on 8 hydro-electric projects with a total general capacity of 355 MW at a cost of Rs. 95.82 crores to be computed by 1977-78. Another 8 projects to gen-

erate 560 MW at a cost of Rs. 144.4 crores have also been planned. In addition there is a master plan for Rs. 101 crores for the development of transmission and distribution lines beyond the current 69,770 KMs of HT and 2,02,647 KMs of LT transmission lines. The government reports that 62,000 towns, villages and hamlets out of a total of 62,487 have been electrified under the rural electrification programme, energising 7.3 lakh pumpsets. In early February REC approved a loan of Rs. 1.39 crores for electrifying 180 villages—the Tiruppathur and Singampunari blocks in Ramanathapuram, Mailam block in South Arcot and Karungalum block in Tirunelveli and rural transmission in Coimbatore. In the total rural electrification programme of the State, REC's contribution has been Rs. 19.3 crores for 60 projects covering 2,605 villages.

For the country also, the power situation was good. During January the average daily power generation was 239 million units (37 million units more than the average of 202 million units in January 1975). On January 29, the generation reached a peak of 248.9 million units. Power generation in February was 15 per cent more than in February 1975. With the 62.5 MW Paras and 30 MW Parli back in operation, Maharashtra's power cuts were reduced in February. Similarly MP's power increased with the provision of 0.3 million units a day from UP with Badarpur Thermal supplying 0.6 million units a day to UP. Orissa shared its surplus with Bihar (1.2 million units a day) and AP (0.6 million units a day). DVC supplied 1.5 million units a day to Calcutta and West Bengal's thermal plant use improved markedly in January and February. A new hydel 80 MW unit was commissioned in Koyna in mid January. The major event in February was the commissioning by the Prime Minister of the Rs. 110 crores Idikki hydel project, where the 5 year delay had almost doubled the cost and resulted in the State losing Rs. 15 crores annually and on the expansion of employment. The first unit, 100 MW of the lower sileru hydel project was commissioned in February, with the second unit following in March/April. Also AP negotiated with Orissa for power supply to cover its surplus needs until its other projects such as the 110 MW unit at Nagarjunasagar, to be commissioned in early 1977, the Ramagundam thermal in September, the Sri Sailam hydel projects with units of 110 MW each and the inter-State 1,000 MW Godavari power stations at Ichampalli fructify. Meanwhile the competition between Tamil Nadu and Andhra Pradesh for the super thermal station continues, with the Union government examining both the relative needs and advantages of the Neyveli and the Ramagundam locations. The February Indo-Sri Lanka negotiations included the project for the construction of an overhead power link connecting the power grids of India and Sri Lanka at a cost of Rs. 75 crores. The power line linking Rameswaram with Sri Lanka will provide for the daily supply of 1,000 million units by Sri Lanka to the Southern grid. One of the questions still under negotiation is the price which Sri Lanka wishes to double from 4 to 8 parse per unit, and which raises the question of the viability of the project.

Water : As a result of the ground water investigations by the Geological Survey of India, a 10 km belt between Akkarai and Covelong has been marked out for development of ground water resources in the State. This is part of GST's geological mapping of the State for both water and mineral locations under which 90 per cent

of the State area has been covered. Its work helped Madras City in its tube well programme, which supplies more than one million gallons of water per day from underground sources. Another important development was the decision of the government to continue the supply of Mettur reservoir water supplies to the Cauvery delta farmers, beyond the usual cut off date of January 28 to February 23 in order to assist the standing samba and thaladi crops. The major event in February was the announcement by the Prime Minister at a meeting in Madras that the Andhra Pradesh, Karnataka and Maharashtra governments had agreed to contribute 5 TMC each of Krishna waters to meet the problem of water supply for Madras city. This is a good gesture and will take about 5 years to fructify before the Krishna waters actually flow into the city. An expert committee, in consulation with the four State governments, is being set up to examine the technical and financial aspects of the project. The water will have to be brought over a distance of 400 kms across 2 rivers and 3 rivulets and whether it would be quicker and cheaper to use pipes or an open canal in light of the Veeranam delays will have to be carefully examined. Also if this is an indication of water resources and use being rationalised and planned on a national, regional and State basis as advocated by this Bulletin with persistence, such a development is urgent and should be welcomed.

Urban Development and Housing : In early February, the Union government made a loan of Rs. 2 crores to the State government for urban development schemes in the Madras Metropolitan area. The loan is the Union share of the Rs. 2 crores plan for the Metropolitan area of which Rs. 6.35 crores is for water supply and sewerage, Rs. 1.2 crores for area development and Rs. 45 lakhs for construction of roads. The total Union government's contribution will include an additional Rs. 65 lakhs, with the State government providing the balance of Rs. 5.35 crores. With the adoption of the urban land ceiling legislation referred to in the last issue (p 128), there was a period of uncertainty in the State—in Madras, Madurai, Coimbatore, Tirunelveli—with regard to urban property registrations, and with the suspension of building permits by MMDA and the Corporation. This has been generally true in all States and is a negative factor at a time when the building industry was slowly getting out of the recession referred to in Vol V p 652. On the housing side, HUDCO gave the State Housing Board in February a loan of Rs. 3.97 crores for building 794 houses in Madras and Madurai, mainly for the EWS and LIG groups. The total aid from HUDCO to the State Board has amounted to Rs. 19.85 crores for 55 schemes in 72 towns, under which 3,529 houses are for EWS, 3,465 for LIG, 1,205 for MIG and 634 houses/flats for HIG. Of the Board's 1975-76 target of 9,139 dwelling units, 7,163 units were completed by December at a total cost of Rs. 12.5 crores, out of which the HUDCO credit was Rs. 5 crores. For 1976-77, HUDCO loans of Rs. 6 crores for the State Board are expected.

Transport: One of the transport problems faced by leather, handloom and silk industry in the State is the accumulation of export orders at the airport which had to be cleared in December by Air India operating a special charter service out of Meenambakkam. Now the Union government has decided that Air India will send the custom cleared export cargo, especially leather consignments, by the container service operated by the Southern Railway

to Bombay and from there to their foreign destinations. The Madras Port Trust reports that a surplus of Rs. 29.82 lakhs is expected for 1975-76 against the anticipated budget deficit of Rs. 4.09 crores. The surplus is due to the increase in port service charges from July 1975, improved turn around of ships, and elimination of overtime. The raised port charges alone brought in an additional Rs. 5.3 crores. On the other hand the total traffic declined from the 8.4 million tonnes target to 8.2 million tonnes, due mainly to the reduced iron-ore exports from 3 million to 2 million tonnes. Food grains imports went up by 11 lakh tonnes, sugar exports which were not foreseen amounted to 1.5 lakh tonnes. The construction of the mechanical ore berth now has enough funds, with the operational surplus, but MAMC has not been able to deliver and erect the machinery for the mechanical handling system, so that the berth will be inaugurated only in 1978. The fisheries harbour is also not on schedule, due to the contractor not being on time with the break water timing. The oil berth is to be deepened to take oil tankers of 10,000 tonnes capacity, which means that the berth must be deepened by an additional 3 feet to 49 feet. For 1976-77, food grains and fertilisers imports are expected to decline by 6 lakh tonnes each, while iron-ore exports will be increased through the mechanical handling at Bharathi docks. Sugar exports will go up by 0.5 lakh tonnes and the total traffic is estimated at 8.45 million tonnes against 1975-76's 8.3 million tonnes. On bus transport, Karnataka has followed this Stat's example and issued in January end an ordinance taking over all private contract carriages for which 800 permits had been issued. Like this State, Karnataka will have to provide the infrastructure for running this enlarged service and incidentally avoid the deficit of Rs. 4 crores that it attributed to the competition on its routes of these contract carriages.

National:

1976-77 Union Budget : The Union Budget for 1976-77 presented to the Lok Sabha in mid March is somewhat of a bold departure from the principles and the consequent provisions of the past 4 annual budget reviewed in the Bulletin since Vol II. Its major and somewhat innovative features are: (a) a planned uncovered deficit budget in place of the orthodox balanced one—(at least in nominal terms). The revised estimate for 1975-76 shows a 50 per cent increase in the revenue estimates from Rs. 601 crores to Rs. 906 crores and a 300 per cent increase in capital account deficit from Rs. 448 crores to Rs. 1,396 crores, *involving a doubling* of the net deficit from Rs. 247 crores to Rs. 490 crores. The increased capital account deficit is due to export promotion (+ Rs. 71 crores), fertiliser (+ Rs. 173 crores), DA for defence personnel (+ Rs. 136 crores), additional plan outlay for steel, shipping and railways, mines, fertilisers, coal, power and transport (+ Rs. 270 crores) and additional plan assistance to the textiles (+ Rs. 198 crores). *The deficit has been kept down* because of the increased resource mobilisation, particularly through VDS (see last issue p 130) and the tax buoyancy which all netted + Rs. 660 crores. For 1976-77, the revenue receipts *are placed at* Rs. 8,227 crores including Rs. 48 crores which will accrue to the Union as a result of increased taxes, and expenditure at Rs. 7,690 crores, giving a surplus of Rs. 489 crores, the capital receipts at Rs. 4,423 crores and expenditure at Rs. 5,280 crores, giving a *deficit of* Rs. 857 crores, involving an overall

uncovered deficit of Rs. 320 crores. This departure from the orthodox budget policy is a deliberate decision aimed at stimulating growth: (b) an effort to leave a larger untaxed surplus with individuals in the hope of increasing saving and incidentally reducing the temptation to tax evasion. The rates of income tax for all slabs are reduced, cutting the maximum marginal rate, including surcharge from 77 per cent to 66 per cent, and leaving surplus funds with individuals ranging from Rs. 44 to Rs. 32,439. Similarly the wealth tax is reduced from the existing 1 to 8 per cent to ½ to 2½ per cent. Whether these measures will lead to increased savings or increased consumption will depend on the discipline of the community. To help this and maintain price stability, the compulsory deposit scheme is to be continued during the year, with rates of deposit increased from 6 to 10 per cent for incomes of Rs. 25,001 to 70,000 and from 8 to 12 per cent for incomes above 70,000 and the DA impounded (Rs. 900 crores), along with additional wages (Rs. 50 crores): (c) The plan outlay is increased by an impressive 31.6 per cent compared to last year's 25 per cent increase at Rs. 7,852 crores. This includes Rs. 4,759 crores from the Union Budget for Central Plans, and within that sum Rs. 1,412 crores for State Plans (which should have been larger). The total central plan will be Rs. 4,090 crores (compared to Rs. 3,154 crores in 1975-76) and the State Plans Rs. 3,762 crores (against Rs. 2,812 crores in 1975-76). The Central Plan provides Rs. 323 crores for agriculture and the State Plan Rs. 474 crores, the Central Plan provides Rs. 20 crores for irrigation and flood control and the State Plans Rs. 673 crores to meet the one million hectares additional irrigated land target against the 5 million hectares 20 point programme target, for power Rs. 129 crores in the Central, Rs. 1,290 crores in the State Plans (compared to the last year's Rs. 983 crores) are provided for the target of 2,500 MW for the year, for petroleum and petro-chemicals Rs. 274 crores (up from last year's Rs. 174 crores) to ensure indigenous crude production of 9 million tonnes against last year's 8.2 million tonnes and Bombay High's 2 million tonnes annual rate, for coal Rs. 277 crores is provided to meet the target of 108 million tonnes for textiles Rs. 434 crores is provided against last year's Rs. 290 crores, for steel the outlay is doubled to Rs. 402 crores, for transport and communications Rs. 597 crores is provided plus Rs. 170 crores raised by higher railway rates to be noted later, and Rs. 190 crores raised by P and T hikes, for Khadi and Small Industries Rs. 52 crores, and outlays on social services are also increased. This increased plan investment should have a multiplier effect on the economy and the private sector and if prudently programme should avoid inflationary pressures: (d) special measures are proposed to stimulate the private sector and bring it back to the path of growth. (i) The major innovation here is the new investment allowance which will offset the increase in capital costs to benefit new units and expansion of existing units at a higher allowance rate of 25 per cent of the cost of new machinery and plant, against the current 20 per cent, depreciation allowance and is expanded to all small industries and 8 new industries. This new provision will enable industries to plough back their profits to that extent and use the gain after 10 years; (ii) also the companies will be exempted from 5 per cent surcharge if the equivalent is deposited with IDBI for 5 years: the increase in the sur tax exemption limit from 10 to 15 per cent of profit should also promote corporate

saving: (iii) the exemption limit for additional capital from Rs. 25 lakhs to Rs. 50 lakhs will promote the development of small and medium industries: (iv) the interest received by scheduled banks on long term loans to industry for purchase of plant and equipment is exempt from tax, which could mean a much needed relief from the penal rates of interest now charged by banks, involving a reduction by one per cent plus the reduction in lending rates decided by RBI to be referred to in the next issue, all of which will be a means of helping industries to expand and modernise: (v) the selective reduction in excise taxes on consumer durables—a 15 per cent reduction of the tax on small TV sets, the 10 per cent cut on medium refrigerators, the reduction of 5 per cent excise on passenger cars, vans, jeeps and ambulances, tyres and tubes, batteries and the abolition of the tax on motor cycle rickshaws will help in part these industries to climb out of their recession. Similarly the duty on non-levy aluminium is reduced by Rs. 1,200 per tonne and the duty on artificial resins and plastics cut by 16 per cent and that on copper by Rs. 1,400 per tonne: (e) taxes have been adjusted to help the poor man, the tax on ready made garments have been abolished, on textile based on price in place of the present complex rates, and taxes on toilet soaps, detergents, blades, fans, battery cells have been reduced or abolished. To tax the affluent or restrain luxury consumption, the excise on patent and proprietory medicines is increased by 5 per cent, as also taxes on cigarettes, cigars and aerated waters, the import tax on stainless steel plates, sheets and strips of iron and steel, caprolactam, DMT and copper are revised. Houses built for the poor with a plinth area of 80 sq. metres are exempted from wealth tax for 5 years, and a 29 per cent depreciation allowance for houses built by epmloyers for their staff: (i) the tax structure of foreign companies is rationalised, with a flat 40 per cent tax on royalties and new incentives to Indians abroad for remitting capital back to India are provided by exempting these remittances from taxation: (g) the net estimated foreign aid in Rs. 816 crores against Rs. 872.58 crores for 1975-76, including Rs. 150 crores of oil credits and Rs. 178.29 crores from Iran for Kudremukh and other special projects. The net tax result is that for 1976–77 there is no increase or decrease in the anticipated income from direct taxes, while from indirect taxes (customs, excise, stamp duty and duty on narcotics) there is an increase of Rs. 80.13 crores, of which Rs. 47.25 crores will be the Union government's share and Rs. 32.8 crores that of the State government. With this built in imbalance in direct and indirect tax revenue, State budgets will of course worsen the imbalance through further indirect taxes: (h) there is built into the budget an imaginative programme of integrated rural development. Here there is the innovation of the R and D cess on industry to finance the expanded science and technology programme which is increased from Rs. 116 crores to Rs. 136 crores in order to help in execution of the integrated rural development programme, fashioned at the Indian Science Congress at Waltair and which will be governed by the following strategy: (i) full employment of labour and physical resources to activate 100 to 120 millions in the age-group 15-59: (ii) setting up agro-industrial complex for employing 75 million unemployed: (iii) attaining minimum standards of productivity in land, water and natural resources use; (iv) minimum performance standards of public

agencies who will be responsible to the public (v) creating a scientific temper which will change old habits and customs. To attain these, the programme will be (i) a comprehensive survey of natural resources and use of new technologies in agriculture, (ii) a new concept of land reform which will not only break up large estates but reform land ownership and use, with emphasis on personal cultivation and modernised management (iii) setting up of community nurseries, (iv) scientific management of water resources, (v) priority to pest control and fish culture and (vi) improved post harvest technology, (vii) effective family planning and health programmes, (viii) developing alternative sources of fuel, and (ix) setting up of agro-industries. Such is the innovative budget which has gone much further than any of the past 5 annual budgets in taking risks in the interest of breaking through our past and current economic stagnation, in providing the fiscal incentives to improved agricultural productivity and increased industrial production, and in laying down a clear framework for integrated rural development, which is an unorthodox feature of the budget, but which should move us forward in the major aim of alleviating our massive poverty. Now it is for us individuals, the business world and community to ensure that the assumptions of this fiscal documents are not invalidated.

Railway Budget: The revised estimate for 1975-76 and the budget estimates for 1976-77 were presented in March to the Lok Sabha. The 1974-75 accounts showed a small reduction in the anticipated deficits from Rs. 128.19 crores to Rs. 113.82 crores due to increased traffic receipts (Rs. 7.04 crores) and reduced working expenses (Rs. 6. 27 crores). The total debt of the Railways at the end of 1974-75 was Rs. 379.75 crores. The revised estimates for 1975-76 show a combination of the trend of increased traffic receipts, (due to increased loading of wagons, increased coal traffic and passenger traffic) by Rs. 85.89 crores over the budget estimate of Rs. 1,676-86 crores. But the anticipated surplus of Rs. 89.92 crores (four times the budgetted Rs. 23.03 crores) is likely to become a deficit of Rs. 42.81 crores because of the staff costs increase of Rs. 111 crores due to DA pushes, the higher fuel bill (by Rs. 15.18 crores) and rise in prices (Rs. 4.52 crores). This is a poor financial record despite the improved earnings noted. For 1976-77, the freight receipts at the existing fares and rates, with a 4 per cent increase in passenger traffic and in freight traffic by 12 million tonnes are computed at Rs. 1,868.47 crores. Working expenses are estimated at Rs. 1,551.42 crores, to which should be added Rs. 135 crores for the depreciation reserve fund, an additional Rs. 30 crores to the pension fund, the dividend liability to the general revenues Rs. 207.60 crores and Rs. 22.82 crores for miscellaneous items. This results in a deficit of Rs. 78.37 crores to meet which there is to be a 5 per cent supplementary charge on freight traffic in wagon loads carried upto 500 KMs and a 10 per cent surcharge on wagon loads carried beyond that limit of 500 KMs which will provide in 1976-77 Rs. 87.35 crores, converting the deficit of Rs. 78.37 crores into a surplus of Rs. 8.98 crores. In addition, the railways are being allotted Rs. 392.81 crores for their works, machinery and rolling stock programmes for 1976-77 as plan outlay compared to the 1975-76 allotment of Rs. 361 crores. The railways have established a new consultancy company called Rail India Technical and Economic Services Limited to deal with foreign assignments, of which several have been received. Also the

government is setting up a construction unit as an automomous company to bid for railway projects in foreign countries. The Railway Budget has the usual pluses and minuses. On the positive side is the fact that the industry is becoming a well managed enterprise. It is the second largest railway system in the world with a ratte kilometrage of 60,301, a track kilometrage of 10,135, employing 1.44 million workers, owning 11,100 locomotives, 36,500 coaches, 3,01,000 goods vehicles and 7,085 railway stations, operating 223.5 million passenger train kilometres and 196.6 million goods trains kilometres annually. Second the trend is to keep down expenditures and maximise revenues and so minimise the deficits. Third in the 1976-77 budget the rates on oils, gur, Shakkar and jaggery have been left untouched. On the other side, the plan outlay for 1976-77 does not provide for new lines, electrification of lines on trunk routes, and doubling of lines—all of which should be provided for soon to meet the economy's expansion. Further the increased freight charges will result in raising the end prices of many products and to that extent is an inflationary element. Finally, there seems to be some underestimation in calculating the revenues for 1976-77, so that the deficit will be smaller and the surplus larger. If this is so, the additional funds should be used to open new lines and push forward the electrification of trunk routes.

In this context, RBI November Bulletin in a study on railway finances points the way for improved railways financial performance, by using more fully the capacity created through reducing the time lag in the turn around of wagons. Also the railways should attract revenue earning traffic and reduce its working expenses. The 1975-76 budget shows a surplus of Rs. 23. crores, which after payment of interest on loans from general revenues will be Rs. 1.4 crores. Due to its deficits, its debt has increased from Rs. 25 crores at the beginning of the IV Plan to Rs. 380 crores by March 1975, plus Rs. 84 crores on account of deferred dividends to general revenues. The return on capital fell from 4.3-4.8 per cent during the Fourth Plan to 1.4-1.5 per cent in 1973-74 and 1974-75, but is estimated to rise to 5.2 per cent in 1975-76. The basic problem is that railway traffic was 18.4 per cent higher in 1973-74 compared to 1960-61, whereas agricultural production has increased by 28.9 per cent and industrial production by 100.8 per cent during that period. From this point of view, it was a sound decision that the government sanctioned in early February an additional sum of Rs. 28 crores for the railway rolling stock. Rs. 7.25 crores is for wagons procurement (10,000 wagons) and 260 coaches so that the coach, wagon and locomotive units may be fully occupied.

Economic Survey: In addition to the Finance Minister's Annual Economic Survey presented to the Lok Sabha in early March, there are four other documents, the NCAER's annual review of the economy, CSO's quick estimates for 1974-75, the government of India's review of the economic situation in late February and ESCAP's annual survey, which throw light on the state of the economy. All documents are agreed upon some major positive factors. First the control of inflation and the turn around of prices is one such factor. The Economic Survey reports a decline in the wholesale price Index for 12 months at February 14, 1976 by 8 per cent, and retail prices for the year ending December 1975 by 6.1 per cent. All other documents concur with this trend. Second against a rise of 0.2 per cent of the national income in 1974-75

according to CSO, also quoted by NCAER the Economic Survey forecasts a rise in national income by 5.5 per cent in 1975-76, the NCAER placing the rise at 6 per cent. Third food grains production for 1975-76 is estimated at 114 million tonnes by the Economic Survey and NCAER, the February review placing it at over 115 million tonnes. CSO calls attention to the fall in food grains production by 4.3 per cent in 1974-75. Fourth the Economic Survey refers to the decline in industrial production in 1973-74 by 0.2 per cent and forecasts an increase by 4.5 per cent in 1975-76. (CSO reports an increase in 1974-75 of 7.3 per cent in fishing, 8 per cent in mining and quarrying, 5 per cent in construction and electricity, 6.1 per cent in railway and 5.9 per cent in public administration). On the negative side, especially for the future, the most disquieting feature is the decline in the rate of saving and capital formation which for 1974-75, CSO reports at 11.8 per cent 12.8 per cent respectively compared to 12.2 per cent and 13 per cent for 1973-74, and which the Economic Survey places at 13.6 per cent and 14.4 per cent in 1973-74 and 13.2 per cent and 14.2 per cent in 1974-75. The most urgent task is to increase the rate of saving which is declining and in this both the private sector and the household sector must take the lead. The public sector is doing well, their pre-tax net profit being Rs. 312 crores in 1974-75 compared to Rs. 148.74 crores in 1973-74, according to the Economic Survey. CSO reports that the household sector saving fell to 76 per cent, while public sector rose to 14.5 per cent in 1973-74. For this year, the decline in the rate of saving may not hit hard because, as the NCAER points out, in addition to the 11.5 per cent of domestic saving averaging to Rs. 6,400 crores, net aid and invisibles may amount to Rs. 1,100-1,200 crores, providing Rs. 7,700 to 7,800 crores as resources for investment. But this reliance on aid is no basis for self-sustaining growth. Second the industrial front presents two problems. As the Economic Survey points out, against the positive features of relaxation of price controls on a number of products, extension of dual pricing to aluminium, delicensing of 21 industries, permission for automatic growth in selected engineering industries, and the decline in industrial unrest from 6.83 million days last in July 1975 to 0.13 million days in September, the February review points to the slowdown in cotton yarn, mill-made cotton cloth, cars, jeeps auto rickshaws also referred to in the Economic Survey, which concludes with pointing out that industrial growth will have to be twice the rate of the last decade if an overall growth of 5.5 to 6 per cent is to be attained. On the agricultural side, the survey states that the increase in the inputs of power, fertiliser, seeds plus the increase of 5 million hectares of irrigated land and rural electrification should be used to increase agricultural production and productivity for the future, and use the carry over of 11 million tonnes to buid a buffer of 7-8 million and reduce imports. Another negative element here is the deteriorating terms of trade between the agricultural and manufacturing sector as shown by the rise in the ratio of index of manufactures to that of farm produce from April 1974 of 71.0 to 74.7 in April 1975 and 68.31 in December 1975. This gives urgency to the plea of the Economic Survey for an integrated strategy of rural development based on analysis of local needs, resources and potentials involving accelerating command area development, improved production technology and provision of farmers incentives as one way of ameliorating the worst forms of rural poverty. The

Budget document as noted earlier provides this frame-work. On international trade, the Economic Survey points to the deterioration of the balance of trade which was minus Rs. 1,164 crores in 1974-75 and refers to the first nine months 1975-76 deficit value of Rs. 1,113.8 crores, while NCAER hopefully forecasts a lower annual deficit of Rs. 900 crores without stating reasons for it. The survey states flatly that an annual quantum increase of 8 to 10 per cent in exports is needed. There is likely to be a reduction in the programme of imports because of the surplus position on steel, fertiliser and Bombay High crude. Whether this easing of pressure on imports should be used to liberalise out imports for boosting export industries and raising the rate of investment both through plant modernisation, and erection of new capacity as proposed by NCAER demands further study. Finally on the fiscal side, the Economic Survey refers to the stimulus to production and growth which is the fiscal policy imperative. The 1975-76 plan was increased by 23 per cent, the major taxes of the Central government, the income, corporate, customs and excise taxes showed buoyancy, market borrowing increased by Rs. 125 crores above the estimate, the VDS produced, as noted in last issue p 130, Rs. 1,578 crores as disclosure, Rs. 241 crores in income tax and Rs. 7.7 crores in wealth tax realised of which Rs. 159 crores and Rs. 4.2 crores respectively have been paid, plus Rs. 4.9 crores invested in government sectors: and the State governments raising of Rs. 358 crores in 1974-75 and Rs. 198 in 1975-76 as resources mobilisation are noted with satisfaction. However the continuing losses of the States in irrigation works and the inadequate returns of electricity undertakings are emphasised and the need to correct these 2 rates and make special efforts to tax increased agricultural incomes are emphasised. The Economic Survey warns that with the grant of 5 DAs and increase in development outlays, the deficit for the year will be more than the budgetted Rs. 247 crores. The major question which the Budget answers is the extent to which the tax system should be modified and money supply further increased to push forward the country's economic development.

One index of the economy's shape is the capital output ratio which in the First Plan was 2.4:1 (against the planned 1.8:1), in Second Plan 3.5:1 (2.3:1), the Third Plan 6.0:1 (2.6:1), Fourth Plan 4.4:1 (3.4:1) and for the Fifth Plan is estimated at 5.4:1 (3.7:1). This is a poor record indicating an increasing rate and quantum of investment to attain the same increase in GNP. For the Fifth Plan this will mean an investment of Rs. 17,380 crores for an increase of Rs. 3,220 crores in GNP. It also means of an increase of 16 per cent in the Fifth Plan National Income againat the targetted 27.5 per cent. It further means that the techniques of production must change and become less capital consuming. On the industrial front, the official index of industrial production for November 1975 at 119.2 was 4.8 per cent higher than November 1974. During the first 8 months April-November, 1975-76, industrial growth was 3.4 per cent compared to the 1974-75 growth of 2.2 per cent. In this context the share of the small sector has steadily increased. In 1972 it was Rs. 2,900 crores, accounting for 35 per cent of total industrial production, Rs. 3,420 crores in 1973, growing at 12 per cent, Rs. 4,932 crores in 1974 growing at 12 per cent, and estimated for 1975 at Rs. 5,742 crores, growing at 14 per cent and accounting for 38 per cent of total industrial production. In 1975 while cotton textiles,

cotton yarn and jute were stagnating, iron and steel fertilisers, soap, vanaspathi, coffee, lead and aluminium have done well. The public sector in particular has been in the lead in this matter.

Prices and Anti-inflation: The wholesale index at January 31 stood at 289.9, representing a fall of 0.2 per cent compared to the preceding week ending January 24, and of 7.8 per cent compared to January 31, of 1975. Food articles fell by 0.2 per cent, with the price of rice falling by 0.8 per cent, industrial raw materials by 1.4 per cent, while fuel, power, light and lubricants and chemicals remained stationary, and liquor and tobacco rose by 1.4 per cent and 5.9 per cent respectively. Similarly the Economic Times price index for Greater Bombay shows a fall of 3.4 per cent over the December price level. Vegetable and fruit prices fell by 32.7 per cent during the month, that for fats and oils by 6.5 per cent, and prices of rice, wheat and coarse grains continued their decline by 3.7 per cent and 6.8 per cent respectively. Pulses prices rose and that of transport. The possibility of linking more closely agricultural raw materials prices and the prices of their processed end products is under study. The Union agricultural ministry's initial reaction is somewhat negative to this approach because of the regional variations in production patterns and consumers preferences in this vast country, the seasonal behaviour of agricultural prices versus the relative stability of industrial prices, involving frequent changes in administered prices and some distortion of price signals, investment decisions and production structure. In the case of sugar and textiles the link is very much a decisive factor. Further agricultural prices are fixed as an appropriate support policy, to ensure reasonable prices to the farmers. Given the increase in cultivation costs, there is need to keep agricultural prices at a level to compensate for this escalation. In addition the government points to its action on the exports, imports and stocking programme front as further means of helping the farmer and agricultural production. This complex of factors which determine primary prices must be taken into account in any attempt to explain both current and secular trends in prices. One of the puzzling elements is the decline in prices alongside of an increase in money supply. Between April 1975 and January 1976, money supply with the public increased by 7.7 per cent, compared to the 1974-75 rise of 4.6 per cent. Of the two elements that constitute the increase in money supply, the increase in currency with the public was Rs. 229 crores, while increase on deposit money was Rs. 660 crores. Despite the continued credit rationing, bank credit to the commercial sector has expanded by 15.2 per cent to Rs. 1,657 crores, compared to the previous year's 11.1 per cent or Rs. 1,045 crores. One factor which has not played a major part in increased money supply is the net bank credit to the government which was 10.4 per cent (Rs. 983 crores) compared to the 1974-75 11.7 per cent (Rs. 1,017 crores). Other elements in the picture are: the increase in food advances by Rs. 257 crores due to heavy food grain purchasers at this time, larger bills rediscounting of Rs. 82 crores (Rs. 60 crores last year), gross bank credit expansion of Rs. 794 crores, 8.4 per cent (Rs. 387 crores, 4.9 per cent last year), and banks' borrowings from the Reserve Bank which increased by Rs. 356 crores compared to the last busy season's Rs. 16 crores. Foreign exchange assets are high at Rs. 848.36 crores as at January 16, compared to Rs. 632.89 crores in March 1975 and Rs. 529.88 crores in March 1974, with an increase of Rs. 47.26

crores in the week ending January 23, making a total foreign exchange assets position of Rs. 895.62 crores. This is the background to the feeling that on the price front, the economy is in good shape, as the increase in money is being used for productive purposes, which with the curbing of black market activities is being enhanced, and the increased food grains stock is absorbing the increased money supply without raising prices. As a resource mobilisation source this and planned deficit financing should be given serious consideration.

Urban Land Ceiling: As noted earlier, in February, Lok Sabha adopted the Urban Land Ceiling and Regulation Bill. The measures apply first to 11 States who have authorised Lok Sabha to legislate on the subject—Andhra Pradesh, Gujarat Haryana, Madhya Pradesh, Karnataka, Maharashtra, Orissa, Punjab, Tripura, Uttar Pradesh, West Bengal and Union Territories—and any other State which wishes it. For future constructions, in A and B Urban areas 300 square metres are the plinth area limit, and for C and D areas 500 square metres. The excess land will be acquired by the State government on payment of cash and bonds. Heavy taxes are imposed to discourage luxury housing. The Bill has an essential negative function to prevent concentration of urban lands in a few hands, and only system of profiteering and rackeetering. The manner in which it is administered by the States will decide as to whether it will be a social justice instrument and at the same time not add to the recessionary trends that the vital building has just so recently gone through.

Public Sector Performance: The RBI November Bulletin estimates that the gross profits of 82 Union government and 61 State governments companies nearly doubled at Rs. 337 crores for the year ending March 1974, due mainly to increased total income of Rs. 4,559 crores (an increase of Rs. 1,065 crores) which offsets the expenditure increase of Rs. 902 crores The value of Union government units rose by 31.6 per cent during the year ending March 1974 and that of State units by 15.3 per cent. For the 9 months April-December 1975, the public sector units increased output by 15 per cent compared to that period in 1974. Steel output increased by 17 per cent, coal by 12 per cent, nitrogenous fertilisers by 37 per cent, cement by 25 per cent and power by 10 per cent. This improved public sector performance was in part due to good materials management and the progressive reduction of inventories. The government reports that the inventory position in number of months of output came down from 7.9 in March 1966 to 5.8 in 1969, 4.4 in 1973 and 3.9 in March 1975. This achievement was despite the problems posed by power units during the year, the short supply of some items and the long lead time for imported materials. This aspect of management is under continuous review from the point of view of organisational structures, adoption of better techniques and opportunities for training workers.

National Production Front :

Steel: During the 10 months April 1975 to January 1976, the 6 integrated steel plants produced 5,899 thousand tonnes of steel compared to 5,094 thousand tonnes in that period in the previous year. For January they produced 100.6 per cent of the target at 6,97,900 tonnes. Rourkela's production of 8,12,610 tonnes during this period has exceeded the previous year's 12 months production by 683 tonnes. On February 3, it crossed the

10 million tonne mark in the production of saleable steel, producing Rs. 1,660 crores of steel against an investment of Rs. 400 crores. It is setting up a pipe line project (for Rs. 16 crores) to meet the demands of the growing oil industry and has introduced into the market a special alloy used in railway wagons and steel machinery, which had so far been imported. All units connected with the 1.7 million tonnes stage of Bokaro were commissioned by January. DSP produced a record of 58,146 tonnes during January and its production of a saleable steel recorded a 59.6 per cent rise in January 1976 compared to the previous year January. IISCO too is doing well and the government has under consideration a Rs. 97.5 crores 10 year plan for it to sustain the rated capacity production level. The TISCO expansion from 1 to 2.5 million tonnes has been the subject of a feasibility study completed by mid 1974 (see Vol IV pp 347-348) and given the tight resources position, the fall in demand for steel in the country and the increase in the capital costs of the project from Rs. 1,705 crores by about 40 per cent since the study's start in 1973—all have led to the decision to postpone the expansion programme. SAIL forecasts that the 1975-76 export of Rs. 100 crores of steel will be doubled in 1976-77. Similarly an increase in production of one million tonnes is planned for 1976-77. Taking advantage of this situation, the public undertakings committee of Lok Sabha has recommended that an expert committee be appointed to go into the question of reduction of imports and diversification of product mix so that the country can reach self-sufficiency in steel. To start with, the committee recommends that imports should be further reduced and experts expanded. It has also proposed that SAIL should ensure that the dual pricing facilitated the work of the various groups of industrial consumers, and in particular priorities are so established and executed that agricultural operations are not hampered by lack of adequate supplies.

Crude : In February the accent was on the expansion of crude output and supplies for the country. The announcement that Bombay High crude will become available from April at the rate of one million tonnes per annum, and the daily output of 80,000 barrels from 1977 meaning that in 24 months Bombay High will be producing 4 million tonnes confirms analysis made in earlier issues of the Bulletin. Plans are now being executed to drill 10 new wells a year in the area, and for Bharath Refineries to process the crude supplies from Bombay High. In February, drilling started at a location 64 kms north west of Bombay High on the basis of interpreted data from Anveshak. To operate the equipment for this project, 100 scientists including geophysicists, programmers, mathematicians, and electronic engineers have been assembled and are at work. Also the Cauvery offshore basin, whose geology is different from that on shore and promises to be heavily oil bearing, will be drilled by the Canadian firm, Asamera, from July. For offshore drilling, offshore drilling rigs are now fairly easily available because of the fall in world orders for such rigs. ONGC can therefore get its needed rigs fairly speedily as it did the rig, Shenandoah, which reached Bombay High within 2 months. On foreign supplies, India concluded an agreement in February with the Iran government for the supply of 2 million tonnes of crude during 1976-77, which with the supply of 2.7 million tonnes by the National Iranian Oil Company to Madras Refineries will mean a total Iranian supply of 4.7 million tonnes. Also the government entered into an agreement

with Shell International for the supply of 12.5 million tonnes of crude over 5 years, which means that for 1976-77 there would be from this source an additional 2.5 million tonnes. As noted in the last issue (p 134), with the take over of Burmah Shell, the company's refineries are now available for processing Bombay crude and crude from the Shell International source. Now the government has control of 95 per cent of the production and marketing of petroleum products in the country. With the supplies from Saudi Arabia, Iraq, and UAE referred to in the last issue (p 134), and 2.75 million tonnes from Exxon, the import of 14 to 14.5 milllion tonnes for the year 76-77 is assured. This means a total petroleum products availability of 23.5 million tonnes for the year which should meet all demands in the Economy. The outlay on oil exploration for 1976-77 will be Rs. 360 crores, a rise of Rs. 70 crores over that of last year. The crude target production for 1976-77 is 9.5 million tonnes and this target will be divided about equally between in shore and off-shore exploration. With the improvement in offshore drilling plans and executions, ONGC plans to concentrate on onshore drilling for the year—in Punjab, Dehra Dun, West Bengal, Tripura and Cauvery and the division of funds during the year will show this concentration.

Coal: Coal production for the period April 1975 to January 1976 was over 79 million tonnes (71 million tonnes for that period in the previous year), in December and January production exceeding 9 million tonnes. Coking coal stocks with steel plants was above 5 lakh tonnes in mid February, equivalent to 15 days consumption. Further as a result of higher production and lower offtake, the stock piling at the colliery pit heads in January was 9 million tonnes (against 6.5 million tonnes in January 1975). Power stations have an average of 40 days consumption, and railways 17 days stocks. The CFRI, Dhanbad reports a break through in coal technology for producing low cost coal for industrial purposes. This oil agglomoration technique has value for many coal using industries, particularly the thermal plants. Further the large scale manufacture of coal mining equipment within the country is likely to reduce both imports and the capital costs of mines. CMDI is being strengthened to produce the needed machinery and save in the lead time needed. In this context, the feasibility of coal exports should be seriously considered.

Copper and Iron-ore: Copper mining was launched in February at Mailasam in AP. It is a small project and meant mainly to develop the tribal area. FRI, Dhanbad reported in early February the discovery of extensive iron-ore deposits of the siderite variety. It is similar to the kind so far imported from Spain by the vanaspathi industry for generating hydrogen. These iron-ore deposits will now replace Spanish imports for use by the vanaspathi industry.

Cement: Cement production in the country is at 79 per cent of installed capacity and for 1975-76 is estimated at 16.5 million tonnes compared to the previous year's 14 million tonnes. For 1976-77 a target of 17 million tonnes has been set, current capacity is 20 million tonnes, to which two further units going into productinn during the year will add half a million tonnes. Both public and private sector units are keeping in line on capacity use, which was 74 per cent and 76 per cent respectively for the year, and which in December became 88 per cent and 86 per cent. The improved capacity

use and production has been facilitated by the good power position, and the streamlining of wagon movements both for coal supplies and for lifting cement stocks. The result of the increased supply is that in almost all States, distribution controls have been lifted.

Textiles: Stocks of cotton cloth as at January were 1.64 lakh metric bales of unsold and one lakh bales of sold cloth. January production is reported at 89 million kg. of cotton yarn and 362 million metres of cotton cloth. While the National Co-operative Consumers' Federation holds that the so called accumulation of controlled cloth by the mills was a myth and was propaganda aimed at selling such cloth in any way they liked and getting various concessions from government, and an Economic Times staff report in February states that mills were reducing production to force prices to high levels, the government in early February exempted composite textile mills, whose combined balance sheets for all units showed a loss, and had no resources, from producing controlled cloth varieties. A similar exemption had been granted unitary textile mills earlier (see Vol V p 660). This is a somewhat confusing situation. Co-operatives representatives from 11 States, testify that when they came to Bombay to select their requirements from the 80,000 to 90,000 bales of stocks, they found only 17,000 bales, of which 6,800 bales were pre-March sub-standard production, and the remaining 5,000 bales were of inferior quality. According to them there were no large stocks. The Economic Times report is that in January, cloth production was reduced by 11.6 million metres (from 373.6 million metres in December to 362 million metres in January), even though the mills had reduced their unsold stocks by 12,800 bales at 18.2 million metres between the 2 months. The industry's stock holding in January was 2,64,000 bales which is about a month's production. Thus the mills reduced their unsold stocks above the cut in the production as a means of keeping prices high. Further with the continuing fall in cotton prices, there is no case for not reducing cloth prices. The official statistics on month end stocks of controlled cloth are not very convincing. They are 124.87 million square metres in August, 129.35 million square metres in September and 116.80 million square metres in October. These need further cross checking. But on the basis of these figures, the new exemption has been granted. For the National Textile Corporation an outlay of Rs. 20 crores has been provided in the Third Annual Plan for the modernisation of its mills, on which Rs. 20 crores of machines have been installed to date. For the 84 units, the modernisation programme will cost Rs. 52.13 crores which will be provided by the reconstituted IDBI, and its special window which will be responsible for financing the modernisation programme of the textile industry—through (a) providing immediate balancing equipment, (b) renovating plant and machinery, (c) replacing machinery in some cases, (d) diversifying its product through installing processing equipment and (e) expanding the economically viable units. The Rs. 20 crores is one phase of the total programme. At long last, the Union government is understood to be considering legislation to prohibit textile items reserved for the handloom sector being produced by the mills. The alternative to ban the sale of these products by the power loom sector raises both legal and practical implementation difficulties. With the 20 point programme's stress on handloom, there is little doubt that the reservation of these items for the handloom sector will be effectively enforced in all States.

Sugar : Sugar production for this season is expected to be around 45-47 lakh tonnes, leaving an export surplus of 10-12 lakh tonnes. In 1975-76 the government had released 13 lakh tonnes for export through STC and till January 8.38 lakh tonnes valued at Rs. 350 crores had been shipped. The government also revised the sugar levy prices for the current (1975-76) season in thirteen zones, where except in 3 zones where the prices were reduced, prices increases ranging between 81 p to Rs. 49.35 per quintal have been ordered. The Union government has also urged State governments to ensure that sugar mills paid their dues to cane growers, including paying a 12 per cent interest where payments are delayed beyond a fortnight. In February also Lok Sabha passed a bill establishing a fund from the prices paid to sugar mill owners in excess of levy prices for levy sugar. Such refunds will amount to Rs. 40 crores and are to be used as an equilisation fund.

Fertilisers : In 1976-77 a large investment of Rs. 440 crores is to be made on fertiliser production in the country. Of this Rs. 190 crorcs are for investment in 2 large fuel oil based fertiliser projects at Ranipet and Bhatinda. The gas reserves of the country are being carefully and precisely reviewed with a view to base new projects on natural gas—particularly in the Bengal basin. In March, 3 new projects, Namrup expansion, Mangalore and Barauni, with a combined nitrogen production capacity of 4,56,000 tonnes are to be commissioned. For the year nitrogen production is expected to be 15 to 20 lakh tonnes, which is a 33 per cent increase over that of the previous year and higher than the 15 lakh target. During January, a record of 1,57,000 nitrogenous production was attained. On this basis there can be some reduction of fertiliser prices.

Agricultural Production : By mid February, procurement of kharif rice was 4.0 million tonnes against the kharif target of 4.6 million tonnes. Punjab had procured 1.1 million tonnes against its target of 9 lakh tonnes, Haryana 4,25,000 tonnes (target 3,00,000 tonnes), UP 5.58 lakh tonnnes (target 5 lakh tonnes), Tamil Nadu 5.27 lakh tonnes (target 5.20 lakh tonnes), Assam 1.9 lakh tonnes (1.7 lakh tonnes), Bihar 41,000 tonnes (target 25,000 tonnes), Rajasthan 23,000tonnes (10,000tonnes target), Kashmir 41,000 tonnes (target 20,000 tonnes), Andhra Pradesh had so far procured 5.2 lakh tonnes out of its target of 10 lakh tonnes. As forecast, the food production for the year is likely to exceed 114 million tonnes, and the kharif target of procurement go beyond the target of 4.6 lakh tonnes. February winter rains assure a good rabi crop—of wheat, gram, jowar, barley, rice, groundnut and mustard. The rabi target of 45 million tonnes will be attained. Out of 19 million hectares under wheat, 12 million hectares are under HYV wheat. The jowar crop in the main States, Maharashtra, Karnataka and Tamil Nadu is doing well, as is the barley crop. Rabi rice transplantation in West Bengal, Orissa and Andhra Pradesh has been completed. 100 lakh tonnes for rabi and kharif oil seeds are likely to be realised. The jute and maistra target for 1976-77 has been fixed at 70 lakh bales (56.87 lakh bales jute and 12.54 lakh bales maistra). NCST has launched a programme to increase the per unit production of cereals, oils, milk, dairy products, fish, vegetables and plantation crops, reducing post harvest losses by using modern technology in agro-processing procedures. Similarly a comprehensive new technology developed at the Indian Institute of Sugar Cane Research will increase the disease free, high quality sugar cane and enable substantial crops of wheat, potato, mustard

seed etc. to be grown on the same land. Its demonstrations show that when potato is the companion crop, the per acre yield of sugar cane is higher than if sugar cane is grown alone. This technique of companion cropping opens up new possibilities of expanding food output in the country. Another important development is the government's study of the definition of small farmer in terms of income rather than the area of land tilled. In terms of disbursal of loans from the newly set up rural banks, consideration is being given to defining the small farmer on the basis of a net income of Rs. 2,000/-. Alongside there is also the question of either winding up or bringing under the authority of the rural banks, all the multiplicity of rural agencies now operating in the areas, where rural banks are operating and which are preventing the latter from working freely for the small farmer. On the buffer stock front, grain imports during 1975 amounted to 7.2 million tonnes against 5 million tonnes imported in 1974. With the 4.6 million tonnes of the rice procurement and the coming rabi wheat procurement, a buffer stock of 3 million tonnes will be built up. The government should now plan to import annually some 4-5 million tonnes of food grains during the balance of the Fifth Plan—at commercial rates—until a 10-12 million tonnes buffer is built up. UK and India signed an agreement in February for India to receive a gift of 50,400 tonnes of food grains. This should be an exception, as the normal rule should be commercial purchases. For 1976-77, the agricultural outlay of Rs. 348 crores is about the same as for the previous year. This is right as the priority is to procure more with the existing investment. Rs. 20 crores are for command area development, Rs. 11 crores for fishers, Rs. 7.53 crores for land reforms and similar outlays for soil conservation programmes.

Export: Exports in the first 9 months, April to December 1975, amounted to Rs. 2,689 crores, compared to the previous year's 9 months total of Rs. 2,346 crores (a 15 per cent increase), with the possibility that at this rate the exports earnings for 1975-76 may amount to Rs. 3,800 crores. But imports have risen even faster for the period of April-December 1975 to Rs. 3,803 crores, increasing the deficit to Rs. 1,114 crores. This widening trend in the trade deficit can be seen in the fact, that, starting with a surplus of Rs. 103 crores in 1972-73, the following year 1973-74 recorded a deficit of Rs. 432 crores, mounting to Rs. 1,164 crores in 1974-75. Our imports have increased from Rs. 1,824 crores in 1971-72 to Rs. 4,468 crores in 1974-75, with food grains, fertilisers and fuel accounting for 23 per cent of the total imports in 1972-73, but 55 per cent in 1974-75—moving from Rs. 418 crores to Rs. 2,354 crores. While import prices have risen sharply, those of our exports have tapered off and have faced a falling demand market. Against this background, the government has decided on a 10 per cent increase in export target for the Fifth Plan instead of the 7-5 to 8 per cent target in the draft plan. Also as noted in past issues, the impressive 31 per cent increase in 1974-75 exports, amounted in real terms only to 4 per cent. STC is undertaking a crash programme to increase its exports from Rs. 700 crores to Rs. 1,000 crores for 1975-76. Leather exports will be rapidly expanded, and as noted earlier an additional 2 lakh tonnes of sugar have been released by government, making a total of 4.50 lakh tonnes for export. In fact, the Reserve Bank governor proposed that before the end of the Fifth Plan, the export target should exceed, Rs. 5,000 crores to meet our import requirements and escalating world import price. In particular a much stronger effort should be

made in the GSP front, with an overall GSP target of Rs. 1,000 crores to be achieved by 1978. This is possible because our GSP exports have expanded from Rs. 160 crores in 1973 to Rs. 434 crores in 1974, and this represents less than 7 per cent of opportunities open to the country. Following the 20 per cent increase in handloom exports in 1974-75, there can be a further increase in these exports, particularly to US and the Middle East Gulf countries. The Engineering Export Promotion Council has set a target of Rs. 650 crores for engineering goods exports by 1978-79, against the current year's target of Rs. 400 crores and over Rs. 500 crores orders for 1976-77. There were also engineering consultancy contracts with West Asia for Rs. 120 crores. Also India extended a trade credit of Rs. 5 crores to Sri Lanka for the purchase of capital goods and equipment from this country. In late February, India received an assurance from EEC that the import tariff on Indian coir would be abolished at an early date, which in a sense is an extension of the duty free entry for its coir products enjoyed by India with UK and Denmark till December 31, 1975. The understanding also covered the effective and expeditious transfer of appropriate technology for coir manufacture from Europe to India, a joint EEC promotional campaign to popularise coir products, and co-operation in R and D in the development of new end use of coir. Similar proposals for co-operation in expanding leather trade industrial relations between EEC and India were made during the visit of the EEC team on leather and leather goods to India in February. The proposal included the abolition of the heavy import duties on footwear, machinery, and the simplification of import licensing procedures on the Indian side and assisting in locating and full operation of such machines, and more liberal entry of leather goods into EEC markets. The government reports that total export orders for Rs. 180 crores of pig-iron and steel have been booked for the year. The major development here as pointed out in the last issue (p 138) is that the country has emerged as a net exporter of steel, saving the country Rs. 200 crores in foreign exchange. For 1976-77 a target of Rs. 250 crores of steel export has been established with a small Rs. 30 crores only of steel imports. Indian trading with East Europe are on favourable terms, though the currents of trade continue to be imports of manufacturers and exports of primary products. An UNCTAD study on the subject emphasises the scope for Indian exports of consumer products from the engineering sector, and agro based and marine products to these countries. Also the large potential for joint ventures in third world countries is emphasised. A suggestion has been made by the Union minister of commerce for setting up a world trade centre in Madras to give information on exports and imports, and promote quality control, cost reduction and a consortia approach instead of the units duplicating and underculting each other. Despite the continuing unfavourable trade balance, the value of the rupee has been holding up. It was 30.49 p in June 1975 and improved to 31.75 p in November (in 1974 it was 32.69 p). This and the good foreign exchange position are due to increased and improved remittances into India from Indians living and working abroad.

Aid : During February three aid agreements were concluded—two with IDA and one with France. The first IDA agreement was for $ 18 million for aiding the integrated cotton development projects in Haryana, Punjab and Maharashtra through introduction of HYV seeds, improved plant protection, fuller access to credit

and increased ginning and processing efficiency which would help 1,20,000 farm families and 2,00,000 landless labourers. The second IDA credit was for $ 200 million to meet the foreign exchange requirements of the tractor, power tillers, fertilisers, pesticides, heavy earth movers, electrical generation and boilers, transformers, switchgears, machine tools, commercial vehicles and automotive ancillaries industries. The French credit of 340 million Francs (Rs. 69.5 crores) is for purchase of French industrisl development equipment, light machinery and scientific equipment.

International :

Bangla Desh : The jute crop this year in Bangla Desh is 60 per cent higher than normal at 4.5 m bales, compared to last year's 3.9 m bales, which added to the carry over stock of 1.5 m bales makes a supply of 6 m bales. In the past 2 years the jute acreage has fallen to half the traditional 2.4 m acres and yet due to the new technology, the yield per acre has increased by over 66 per cent, that it is from 3 bales per acre to 5 bales. The technology itself is simple—involving improved varieties of seed and fertilisers and good agricultural practices—that even the illiterate farmer can follow. The jute mills have revived and are competing with each other to increase production and are succeeding. The bottleneck is the declining international demand for jute goods, and the new competitors from China and Thailand, for instance who have entered the finished jute goods markets. The mills have lost an estimated Taka 3,000 m since independence, and even the best mills are just breaking even. Hence the problem for the mills is to improve their selling and marketing, and that is what they are now concentrating on. In early February a pilot plant for extracting nuclear minerals—nircon, rutile, ilmenite, monazite, magnetite and leucoxene—found on the beach sands in Cox's Bazaar was inaugurated. The plant costs taka 30 lakhs and will be working on the proven mineral resources of $ 45 million. The Bangla Desh Atomic Energy Commission through its laboratories in helping the development of the project. Two teams, representing Coal India and MMTC, are discussing with Bangla Desh authorities a long term programme to export Indian coal to Bangla Desh. In this negotiation, fuel technologists and mining agencies should be used to link more closely the needs of Bangla Desh with the supply sources. February also saw disagreement between the two countries over the Farakka waters issue—a serious portent of future differences.

Pakistan: Pakistan gave in early February special permission to Iran to transport some urgently needed goods from India by the land route across its country. This is the first time that a third country destination of Indian exports are being allowed to transit Pakistan. Vishakapatnam has been chosen as the port for the transport of the 5,000 tonnes of pig-iron purchased from India by Pakistan as reported in the last issue (p 140).

World Monetary Reform: February recorded some putting back of the first sale of gold designated to finance the IMF Trust Fund for meeting the balance of payment difficulties of the poor countries (see last issue p 140). The question of the extent to which the Bank for International Settlements should act for central banks in buying and selling gold is still the subject of discussion between the US and the European countries. This might put a de facto floor price to gold which would be opposed by the U.S. In February also there were 3 devaluations—

a 10 per cent devaluation of the Peseta, which shook all European currencies and set off speculation about a revaluation of the German mark, a 3.27 per cent devaluation of the Argentine peso at 71.00 pesos to the dollar and a 22 per cent devaluation of the Brazilian cruzeiro—the second in this financial year.

Conference on International Economic Co-operation: The Conference on International Economic Co-operation concluded its 10 day session in February without arriving at concrete decisions. It was a discussion session, rather one where negotiations were undertaken. Neither oil prices nor energy questions were brought to a point of decision. It is hoped that the next session will lead to some decisions. Like the developing country members who meet in January to prepare their position (see last issue p 141), the major industrial nations, members of the International Energy Agency (see Vol VI p 633) also met in January and agreed on a long term programme of energy co-operation which included—efforts to economise on energy, removing obstacles to quicker development of indigenous energy resources, the stimulation of investment in energy development and a $7 floor price for imported oil. Only Canada had some reservations on this agreement, particularly an access to supplies and investments in energy. There is little meeting ground now between the rich and poor countries, which means the negotiations will be both long and hard.

World Aid: In early February, delegates from 73 industrialised and oil producing countries pledged $1.25 billion to an international fund for agricultural development (see Vol V p 666). There is to be a conference to formally launch the Fund in April or May. The industrialised countries pledged $ 360 million and the OPEC countries $ 800 million—the target of $ 1.25 billion will be reached at the conference.

OPEC: As the above account and an UNCTAD study show, the new aid givers—the OPEC countries—have done far better than the traditional aid giving western countries—as the former have in their pledges exceeded the traditional one per cent of GNP target, the percentage being 3.4 per cent of their GNP. The total development aid commitment of the OPEC countries increased five fold between 1973 to 1974 at $ 15 billion, divided equally between concessional and hard loans, with actual disbursements amounting to $ 3.4 billions. But their total aid covered only 30 per cent of the additional finance required by the oil importing countries in 1974, with 75 per cent going through bilateral channels and 78.6 per cent of concessional aid going to Arab countries. Only 24 out of 42 MSA countries received OPEC aid, with Egypt receiving over half the aid. Oil importing developing countries including India will incur a current account deficit of $ 35,000 million in 1975, according to an UNCTAD report, compared to the 1973 deficit of $ 11,000 million and 1974 deficit of $ 32,000 million. OPEC aid has no multilateral forum for co-ordination and rationalisation and UNCTAD recommends OPEC choosing an existing agency for this purpose. In February, Iran decided to reduce its crude price by 9 5 cents per barrel. The significance of this reduction needs to be examined over the next few months. The reduction is related to the fall of $ 1.5 billion in Iran's revenue, and contraction in OPEC's overall balance of payment surplus due to the fall in the world demand for crude—itself the result of the growth of alternative energy

sources and the slump in oil consumption by the West, consequent on the recession. In the third quarter of 1975 oil exporting countries recorded an overall deficit in international payments—in part due to the outflow of capital from these countries. Compared to the surplus of 7.7 billion SDRs in the third quarter of 1974, they had a deficit of 882 million SDRs for the third quarter of 1975. In 12 months, the largest reductions were in the reserves of Saudi Arabia (3.5 billion SDRs), Nigeria (2.0 billion SDRs) and Iran (1.8 billion SDRs). The industrial countries had an overall surplus of 0.8 million SDRs in the third quarter, mainly due to the U.S. favourable balance of SDR 3.5 billion. In Asia, the external accounts of India and Korea improved between the third quarters of 1974 to 1975 but adverse developments in overall balances of Malaysia, Pakistan, Phillippines and Thailand were registered. IMF's oil facility purchases by member countries totalled 5.8 billion SDR till the end of January 1976.

New International Economic Order: The Manila meeting of the "group of 77" ministers in February preparing for the UNCTAD Nairobi meeting later this year worked out the NIEO charter, comprising an integrated commodity programme, transfer of technology, trade in manufactures and semi-manufactures, international monetary and financial reforms, restructures of UNCTAD multilateral trade and problem of the least developed, developing, land locked and island countries. There is need for negotiations between the industrialised and the developing world on these issues—within an agreed time front. It is from this point of view that the conference on International Economic Co-operation takes on special importance.

World Bank and UNCTAD reports: The President of the Bank referred in February to the programme initiated by Bank for attacking rural poverty and now extended to dealing with urban poverty. 40 per cent of the world's people are marginal, living lines of absolute poverty. Bank policies place emphasis on projects which encourage not only economic growth but increase the productivity of the poor. The report also emphasised the need for a U. N. focal point on development aid which would report objectively on what needs to be done and in what order of priority. An UNCTAD report in February has proposed the development of an integrated global system of economic co-operation between developing countries based on the concept of collective self-reliance. First, existing regional and sub-regional economic groupings should be strengthened not only for trade but also for joint action on regional industrial and agricultural resources development and a common transport infrastructure. Trade expansion should be promoted by preferences among developing countries, establishment of multi-national import and export enterprises and payments arrangements. Second clearing arrangements at regional and sub-regional arrangements should be developed and SDRs should be used as a unit of account in the clearing unions. Finally on multi-national enterprises there should be inventories of multi-national projects within each region and their execution aided by U. N. agencies. The debt servicing difficulties of the developing countries are also highlightened in another report. UNCTAD - IV to meet in Nairobi in September will consider a proposal of convening a conference of major donor, creditor and debtor countries to devise ways to mitigate the debt burden and also consider measures to increase net inflow of capital to develop-

ing countries to meet their long felt need. In addition to the link between SDR and development assistance, the report also proposes new mechanisms for generating development assistance resources through interest subsidies, a special taxation on income or trade and enlarged operations by development banks.

World Trade and World Patents: A U. S. study shows that total world trade will grow by 3.5 per cent in 1976 and by 9.92 in 1977—a forecast by Project Link, a large econometric model that brings together individual country models on a global basis. On world patents an UNCTAD shows that during the seventies, the developing countries will be paying the developed countries $ 9,000 million on account of patents, technology and trade marks. At the end of 1960 the cost was $ 1,500 million and the closing of this technological gap between the rich and the poor countries is one of the issues to which the UNCTAD IV will address itself.

World Food: FAO reports that developing countries had a record food production in 1975. There were only 3 areas—Comorro, Timor and Lebanon—where there were food shortages. The good food situation was due to good monsoons, as in India. Even so half a billion are underfed and undernourished, according to FAO, in a region running from Latin America through Africa to Asia. This year's prospects are good (360 million tonnes of rice), as also the price levels, which have fallen from $17 a CWT two years ago to $ 8 now. The International Wheat Council estimates the 1975 world wheat crop at 351 million tonnes, less by 2.2 million tonnes than the 1974 crop. There is some uncertainty about the US winter wheat crop because of drought and snow and also the harvest in China, Israel and West Asia where the weather has been unsatisfactory. On the whole, the 1975-76 prospects are good and the World Bank forecasts a 20 per cent reduction in the food imports bill of developing countries—but even so two and a half times higher than in 1972. The critical production decreases in the USSR need to be watched.

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II Agricultural Development

Paddy :

By early February, about 50 per cent—3.75 lakh acres out of 6.80 lakhs acres—of the samba paddy in Thanjavur district had been harvested and a start made in regard to the thaladi crop, where harvesting was completed in 65,000 acres out of a total 3.81 lakh acres. In Tiruchi district, 75 per cent of the samba crop on 2.1 lakh acres had been harvested, and the daily market arrivals at the 28 district purchase centres in notified taluks of Tiruchi, Lalgudi, Kulitalai and Musiri

ranged between 8,000 and 10,000 bags a day. In the district, summer paddy plans are being prepared—with Navarai being raised on 3,400 acres, millets on 49,000 acres and pulses on 40,500 acres. The samba yield of IR-20 in this district has ranged between 1,700-3,300 kg. per acre and ponni between 1,400 kg. to 2,100 kg. per acre. The State average has been 2,200 kg. per hectare, which is the highest in the country, the all India average being 1,100 kg. per hectare. The State is also the second largest rice producer in the country with 6.5 per cent of the rice area of the country, contributing 14 per cent to the total country rice production. With the good harvest, the State problem is one of storage and disposal of supply. The government procured 3 lakh tonnes from kuruvai and 2.5 lakh tonnes from samba, and procurement was still continuing at the end of February. It has offered one lakh tonnes of rice to the central pool and is moving rice from Thanjavur, North Arcot and all surplus districts to Madras, Ramanathapuram, Coimbatore and other deficit areas. In this connection of the surplus supplies, two issues have been raised. The first is whether the restrictions on movements of paddy and rice within the State should be relaxed. Would some relief in the inter-district and inter-taluk movement restrictions help farmers in clearing their supplies more quickly? Would the liberalisation also stabilise prices in the districts. Tiruchirapalli has permitted card holders to buy their monthly or annual requirements of paddy from farmers and move the purchases to their homes within the district under permits issued by the taluk supply officers. Should consumers in urban areas similarly buy from co-operatives in other districts and move the stocks to their homes? The second issue is whether the Southern Zone should be treated as a single food zone as a means of meeting the rice demands of all the States more evenly, and of bringing down prices. As far as Tamil Nadu is concerned, studies show that a Southern food zone will not help. The State is just self-sufficient in normal years and the dependence on the monsoons by all the Southern States makes a common food zone np help to their problems of scarcity. Rather the deficit areas in each State should be identified and a public distribution system for them and for urban areas should be organised both to control prices and keep them low, the levy system and control over inter-district movement as an aid to levy should be developed, and half the marketable surplus should be procured as a means of stabilising prices. While the procurement price should cover the inflation rate, cost of cultivation, inputs, incentives for increased production and to some extent the income distribution between the agricultural and non-agricultural sectors, it should vary inversely with the market price, if it is to be a stabilising factor. Finally as a means of increasing production, SMIP and intensification of dry farming technology should be undertaken, alongside of increased use of HYV seeds, multiple cropping, soil conservation water use and effective utilisation of chemical fertilisers and organic manure.

Storage and Plant Protection:

Plans are underway to increase by the end of the year the storage capacity of the State from the present 2.5 lakh tonnes to 4 lakh tonnes by the Central Warehousing Corporation (CWC). At a cost of Rs. 2.63 crores, godowns are to be constructed in Virudhunagar, Erode, Coimbatore, Tiruchi, Thanjavur, Chidambaram, Nagercoil, Madurai and Madras. Also in some other existing godowns, plinth construction is being undertaken to increase storage

space. In Thanjavur alone, such construction has increased the storage capacity by 20,000 tonnes. CWC is also hiring godowns wherever available and is trying to clear its wheat and fertilisers stocks quickly in order to find space for the incoming paddy. On the question of plant protection, the Coimbatore Seminar in February calls attention to the annual loss of Rs. 5,000 crores, which is 20 per cent of the agricultural output, suffered by the country because of various pests. 26 per cent damage is caused by plant diseases to the plants, 20 per cent is caused by insects, 33 per cent because of weeds in the fields, and 6-8 per cent due to the manner of storage. In a rice field, weeds remove 62 kg. of N, 20 kg. of P, and 65 kg. of K from one hectare of land, costing about Rs. 600. In storage godowns under high humid conditions, certain pests can reduce the quantity of grains by 20-30 per cent. Cost-benefit studies show that with an input of one rupee by the farmer, Rs. 6-10 worth of farm produce may be saved. FCI computes that if 2,400 tonnes of herbicide costing Rs. 12 crores could be saved and used for additional crop fields, the yield would be 6 lakh tonnes of grain worth Rs. 60 crores. There are problems faced by the farmer in the use of pesticides—their rising prices, the technical training of the extension officers in the use of pesticides, the aid needed by the pesticides industries to meet the varying and urgent needs of farmers and particularly those facing an attack and the relation of pesticides to the different agro-climatic zones and sub-zones in the State and country—all this call for more intensified R and D programmes in this area.

Research Results:

The Central Rice Research Institute, Cuttack, released in February an ultra short duration rice variety which matures in 70 days. This CRM-13-3241, is a dwarf type (65-70 CM), can be grown in different seasons, under direct seeding and transplanting. Its capacity to mature in 70 days makes it a crop to be grown in dry lands with short spells of rainfall, or to take advantage of the residual moisture left by floods in flood prone areas. This seems the answer to the problem of freeing rice cultivation from weather vagaries under study by the Indian Rice Development Council. Raising community nurseries and distributing seedlings instead of seeds as a means of marking further utilisation of the rain fall and reducing the time lag between the period of water arrival and the time of transplanting have been proposed by the Council. Also proper implements—tractors, power fillers etc.—should be used to get the land ready quickly and improve constantly the crop management capacity of the farmers. Another improvement was developed by the SFDA and the department in Molasur in the Sriperumbudur block in which over 100 acres of the traditional ragi which yields 2 quintals per acre is replaced by hybrid jowar (cholam) with a yield of 8 quintals per acre, increasing the farmer's income by as much as Rs. 800 per acre. This scheme now being extended to 3 other villages, might lead to an expansion of jowar cultivation and consumption in the State. The Tamil Nadu Agricultural University has established a horti-cultural research station on a 114 acre plot at Yercaud for research on dry land farming conditions for the growing of vegetables, spices, medicinal plants and flowers both in hilly tracts and the plains. The studies will also cover suitable rotation of crops, mixed farming, and poultry and dairy farming. This is the second such station in the State, following the one that is running at Payyiur near Krishnagiri. The Punjab Agricultural University has

released an HYV maize variety, JML-603- which matures in 88 days and yields 40 quintals per hectare, is qualitatively better tasting than traditional varieties and is pest resistent. Similarly Kerala Agricultural University advises coconut farmers to bury fresh or dried husks around the coconut trees as one simple means of enabling them to keep their moisture through the year—even in prolonged dry months. To stimulate the growing of cashew nuts which is neglected because of its low yield of 1.5-2.5 kg. per tree, the Konkom Agricultural University has released two varieties —Venguria-I, and Venguria-37-3 which yield 13 kg. to 28 kg. nuts per tree. Their high yielding quality, short flowering and fruiting phases make them attractive to the farmer and also an important foreign exchange earner for the country. R and D work in drying groundnuts grain under irrigated or monsoon conditions is underway in order to reduce the amount groundnut cakes which are wasted due to the moisture and the fungus developing on it. The problem is to reduce the 40 per cent moisture of the harvested groundnut to near zero. Till this is done, particular attention needs to be given to picking the pods and drying them. To improve our cattle fodder, the Udumalpet area grows a good leguminous fodder, lucerne, averaging 30 to 35 tonnes of fodder per acre. It has a high protein content and good in vitamins A, K, and E. A processing unit, the Alfa Agro Industries, runs a dehydrating plant in the area, so that the essential properties of the fodder are processed as feed for poultry, cattle, horses, and live stock.

Cotton:

The winter season cotton in the State is around 2.5 lakh bales and three fourth of it is of the long staple variety. The Cotton Corporation of India has entered the market and is purchasing 50-60 per cent of the regulated markets arrivals. One problem is that little of the cotton grown in Coimbatore, Madurai, Ramanathapuram and Tirunelveli districts pass through the regulated markets except in Coimbatore. In other areas petty merchants and commission agents monopolise the cotton business and do not give the cotton farmer a fair deal. There is need for regulated markets to be developed in all these areas.

Fish Farming:

Fish farming is developing fast. The Tamil Nadu Fishing Corporation will with Union assistance soon be operating large fishing vessels imported from Mexico. A Fish Farmers Development Agency is to be set up in Thanjavur district. In addition to the fishing harbour at Madras, harbours are being built at Kodikarai and Mallipatnam and fisheries development in reservoirs, composite fish culture and brackish water fish culture are being launched. CMFRI has located a substation in Madras for the culture of mussels and oysters and one at Tuticorin on pearls (see Vol IV pp 188 and 367). The Central Inland Fisheries Research Institute has also established a unit at Madras to develop prawn culture.

Tea:

Tea exports in the first eight months, April to November 1975 amounted to 139 million kg. worth Rs. 158 crores compared to the 1974, 8 month total of 144 million kg. at Rs. 138 crores. While exports for the year are estimated at 210 million kg. (217 million kgs. in the previous year), the emphasis now is on value and it is expected that this year's target of Rs. 240 crores (Rs. 220 crores the previous year) will be realised. The 10 per cent cash assistance for non-traditional exports—

packet tea, tea bags, instant tea and the draw back on aluminium foil (see last issue p 145) has helped to increase these items from Rs. 2 crores to Rs. 6.5 crores in 7 months and should be Rs. 15 crores by the end of the year. The government is bringing in legislation at the Budget session of the Lok Sabha to take over the management of sick gardens. 38 gardens have been closed, 14 declared sick, and 175 are in some form of difficulties. The government has defined sickness as a decline in average yield by 25 per cent in the last 3 years, suffering continuous losses and failure to observe statutory obligation in the last 3 years.

Coffee:

From February 12, the Union government increased the export duty on coffee from Rs. 50 to Rs. 3,000 in order to mop up the high profits accruing to Indian exporters because of the escalation in international coffee prices. The coffee prices have shot up from £400 to £840 per tonne due to the coffee crop failure in Brazil. Even this increased export duty will only absorb half the windfall gains which the exporters will be making. This is a short term phenomenon which will soon right itself.

Rubber:

While world consumption of natural and synthetic rubber exceeded production both for October and the 10 months January-October 1975, they were all lower than corresponding figures for 1974. Natural rubber consumption was 2,92,500 metric tons in October 1975 (3,12,000 metric tons in 1974 October) and 5.3 per cent less for January-October at 27,90,000 metric tons. In India total production during 1975-76 amounted to 1.47 lakh tonnes and as 5,000-10,000 tonnes have emerged as surplus, the government has allowed the export of 5,000 tonnes, which will compensate the decline in the offtake of manufacturing units and help domestic prices from falling further.

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III Industrial Development

Salem Steel and Industrial Round Up:

With the take over by the President of the State government, a number of problems are being re-examined. SAIL is reviewing the Salem project report by Dastur (see Vol V p 597) against the background of the achievements to date, such as the acquisition of 1,530 hectares for the project site, the construction of the road, the railway siding and the power supply facilities and stage I of the water supply net work. The Fifth Plan draft provides for Rs. 120 crores for the project. It now remains to be seen what the Union Budget will provide for Salem for the year. A Union team is at work reviewing the industrial progress and problems of the State. Existing projects and new development projects are being reviewed with the local officers. With industrialists the means of maximising capacity use in

industry is the main point of discussion. Five teams have been set up to work on industrial licensing and import-export procedures, linkage of small scale units and ancillary development, maximising capacity use and dealing with infrastructural power problems. The teams are to identify specific problem areas and propose solutions.

Neyveli and Kalpakkam :

The Neyveli fertiliser plant reported in February that against the January target of 5,000 tonnes and April 1975-January 1976 target of 30,000 tonnes, actual production in January was 9,630 tonnes and for the 10 months 40,623 tonnes. January 1976 was the first time since September 1969 that the monthly production touched 9,000 tonnes. The result of this good rate of urea production is that the plants stock of urea is now about 16,000 tonnes. Neyveli has therefore extended credit facilities to co-operative marketing federations and bulk purchasers, besides giving a reasonable margin to its own stockists and dealers to push urea sales. If this is part of the general toning up of all parts of Neyveli, its record of losses for the year should show a fall. On the other hand, February reports are that the Madras Atomic Power Project at Kalpakkam would not be commissioned in 1978 as planned (see Vol V p 597), due to the delay in the arrival of both foreign and indigenous equipment. Some of the critical components for the project are being ordered from France, including the heavy water circulating pumps which local manufacturers have not been able to fabricate in the country. It now looks as if the first unit will be commissioned in late 1979 and the second unit in 1981.

BHEL :

BHEL now manufactures all the boilers and pressure vessels needed by the country and its power plants, which till now had been imported. Hence the Union ministry of Industrial Development is setting a Central Bureau of Standards at Delhi which would inspect boilers, and deal with the manufacturing part of boilers, leaving the State Boiler Inspection Agency to be responsible for installation and inspection. The crucial role of isotopes radiography in ensuring product reliability and the need for exploring fresh areas and new industries for an extensive application of product safety and quality were stressed at a 2 day symposium on industrial isotope radiography at the BHEL community centre. BHEL was itself the first in the country to adopt isotope radiography in this region, and pioneered the way for its adoption by 36 other industries. In a further report, BHEL reports in February that it will be supplying Malaysia with 3 units of 120 MW boilers at a cost of Rs. 17 crores, making a total of 9 boilers which BHEL would have supplied to Malaysia. The Union government reaffirmed its decision to locate the seamless tube project at BHEL, Tiruchi, at a cost of Rs. 58 crores for manufacture of R. 45,000 tubes a year (see Vol V p 94). The importance of this Union project is not only that it will be increased to 75,000 tonnes, but that this is the first central investment since the Third Plan in the State.

Surgical Instruments :

As noted in Vol VI p 24, the committee chaired by Mr. Inderjit Singh completed its study of the Madras Surgical Instruments plant. One of the panels of the committee has recommended that with the infrastructure provided by the surgical instruments plant, a National Institute of

Surgical Instruments and Medical Equipment (NISIME) should be set up. The Institute will (a) have facilities for data collection, (b) disseminate information, (c) survey R and D work in the country, (d) produce photo types of special accessories and components and (e) help form a consortium of indigenous manufacturers to produce quality products to equip our hospitals. The Institute will be a forum for engineers and technicians of various disciplines and surgeons of different specialities to discuss problems of design, pilot production and testing of equipment and instruments. It will cost Rs. 67.5 lakhs, of which Rs. 39 lakhs will be the plant and equipment of the surgical instruments plant. This is only a part of the full report of the Inderjit Singh committee which is now under examination by the government. The plant itself belongs to the light engineering industry category and as such belongs to the ministry of Industrial Development rather than the ministry of Chemicals and Fertilisers. The only question left on which the report has, it is presumed, made specific recommendations is what are the measures that should be undertaken to improve the working of the plant and what part of the plant deals with the concerns of the Chemicals and Fertilisers ministry and should be retained by it.

ICF, Hindustan Teleprinters and Test House :

The Integral Coach Factory announced at the end of February that it is producing one formation of high capacity electric multiple unit for the Western Railway. This increases by 50 per cent the number of coaches in this formation and gives increased power for carrying more passengers and requires lesser running time between terminals. It also doubles the passenger intake capacity not only through its larger formation but by rearrangement of the interior. With increasing electrification, this kind of formation will help the railway to operate both, more efficiently and more economically. Hindustan Teleprinters reports an expansion programme in the project for electric typewriters, which will increase its employment potential beyond the present 1,525 workers. To increase productivity and improve production, it has set up shop floor councils and a joint council that ensures worker participation. It is also increasing by 50 per cent its annual intake, of apprentices from 65 to 100, marking its contribution to this part of the 20 point programme. A Test House has been set up in Madras in February to cover the 4 Southern States for testing mechanical, electrical, chemical, electronic and engineering products. It will provide these testing facilities to Indian standards specifications and so aid technically in the selection and checking of materials, processes, machines etc. and undertake R and D on science and engineering materials. It will also provide training in evaluation technology and ensure optimum use of locally available material. The Madras Test House is the second regional centre (after Bombay) of the National Test House, Calcutta. The 7,000 samples from the South now sent there, can be tested at Madras.

TIIC :

TIIC reports that during the 21 months ending 31 December 1975, it sanctioned assistance to 470 projects amounting to Rs. 15 crores, which was a 50 per cent jump over the previous 21 months. 52 per cent of these approvals were for backward areas units and 70 per cent in the small scale sector. It also processed and sanctioned 225 projects to be run by technocrats at a total cost of Rs. 69.02 crores, of which 47.2 per cent was TIIC

aid. These projects are providing employment to 20,000 workers and when in full operation will produce Rs. 210 crores of goods and services. It also reports that 14 of the projects ranging from the production of nickel cadmum battery cells, cermic capacitors used in television to asphaltic roofing sheets are being produced for the first time in the State.

Cement :

There was a relative cement glut in the State in February. Out of the 17 million tonnes produced in the country, the State produces 3 to 3.5 million tonnes. With the slack in building activity and the exhaustion of building funds by government departments, the demand for cement has fallen to the point where it is being sold by authorised dealers at 50-75 p below the statutory rate of Rs. 18.83 per bag and even below that by unauthorised merchants. There is need for lifting restrictions on construction activity for revival of the demand for cement. Another development is the take off of the 30 tonne pilot mini cement plant using the shift kiln process in place of the more costly rotary kiln process at Dalmiapuram where it was established by the State Department of Industries. The Cement Research Institute took over the management and operation of the plant and has demonstrated that this Rs. 40 lakh plant can be run viably commercially. The Union government intends to establish such mini plants in the North, where small lime deposits are available.

Textiles :

Janata fabrics—quality cloth at low prices to meet the needs of low income group—are being introduced by NTC in the State. NTC has 14 units in the State with a total installed capacity of 3.85 lakh spindles and 1,796 looms. Between 1974 and 1975 their cloth production had increased from 103 lakh metres to 144 lakh metres. To meet their losses due to decreasing prices and demand, the units are using the management information system, so that there is a monthly Rs. 10 lakh reduction in losses. Their modernisation programme of Rs. 7 crores is more than half complete and will be completed by the end of the year. There is need for extension of some of these pointers to the textile industry in the South, which gave notice in February that it will cut wages by Rs. 100 a month to meet its losses. With the increased production of textile machinery, the modernisation of mills should be pushed forward as a priority task of IDBI. SITRA should also set up a monitoring and evaluation system to watch the marginal units and prevent their becoming sick.

Handloom :

The Handloom Development Plan that emerged out of the February meeting of Handloom Ministers in Delhi covered (a) intensive development projects in States having more than 40,000 looms, each project covering 10,000 looms and providing for modernisation of looms and setting up yarn banks, design centres and marketing facilities, (b) export oriented projects covering gain 1,000 looms each, (c) assistance to State institutes to strengthen the share capital of co-operatives and (d) the strengthening of Weavers Service Centres and Institutes of Handloom Technology. The State government has applied for Union government assistance to 6 export oriented centres, which would diversify handloom export products of bedsheets, furnishing fabrics, tea towels, Madras handkerchiefs and checks, Turkish towels, lungis etc. at Karur, Madras, Erode, Srivilliputtur, Kurinchikudi

and Kanyakumari at a cost of Rs. 20 lakh each. To start with the Karur project has been cleared and Rs. 1.8 crores provided to clear the accumulated handloom stocks. In mid February, Re. one lakh was distributed by the Punjab National Bank as loans to 100 handloom weavers of the Coimbatore Handloom Weavers Association. A special rebate of 20 per cent, extended to February end, has been granted the sales of handloom goods, which along with a total of Rs. 4.7 crores given to the Southern States (see Vol V p 288-289 and Vol VI p 26) has resulted in the clearance of accumulated stocks. Exports have been growing, as the Handloom Export Production Council points out, from Rs. 11 crores in 1965 when it started work to Rs. 105 crores in 1974-75. With the various incentives, the 1975-76 target of Rs. 115 crores and the 1976-77 target of Rs. 130 crores will be reached.

Leather:

The 24 man EEC leather delegation completed their tour of the major leather centres, including in particular visits to Madras, Vaniyambadi and Ambur—the major export centres of the country and made agreements about leather goods exports for the coming year to which reference was made earlier. The government is planning to cut the exports of semi-finished leather by 30 per cent in order to increase the export of finished leather, which in the nine months April-December 1975 amounted to Rs. 28.45 crores, compared to the 12 month 1974-75 total of Rs. 30.5 crores. There is some difference of opinion among tanners about the speed with which this switch is being made. What is needed is the further extension of the Rs. 25 lakh common facility centre set up by the Leather Development Fund for small tanners, so that the capacity for finished leather production is continuously increased.

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IV Education, Science and Health

Educational Reform :

Kashmir is now running 2 pilot primary education projects to test the programme recommended by the experts to make primary education compulsory (see Vol V p 419). The Third All India Educational Survey now under way shows that in some States, like Kerala and Tamil Nadu, the accent is on consolidation of the educational expansion which has taken place, while in others like Madhya Pradesh and Orissa the account is still on expansion. As at December 1973 there was a 20 per cent all India expansion of schools at 5,92,083 of which 4,61,864 were primary, 87,702 middle, 32,779 secondary, 6,805 higher secondary and 2,938 intermediate/junior colleges. Again while primary schools increased by 18.95 per cent, middle schools by 13.25 per cent, secondary schools increased by 57.86 per cent, mostly (67 per cent) in rural areas. The increase in school attendance is 24 per

cent at the primary, 40 per cent in the middle and 48 per cent in secondary schools. The ratio of enrolment is 79.16 per cent in the age-group 6-10 and 34.72 per cent in the age-group 11-13. The percentage of girls in schools was 37.64 at the primary, 30.85 at the middle and 27.06 over all. The State government is planning to set up an institute to provide speech therapy for the deaf and train teachers, audiologists and other personnel in techniques of speech training. At the University level, the Union government reports some progress on finalising its position on the open university—as a means of meeting the needs of those who cannot afford whole time college education, of workers and house wives and those who wish to improve their educational qualifications. It would be wise for a start to be made with the University at Delhi and on the basis of its experience for it to be spread to the States. For a country of the size of India, one open university can only be a start and will need to be multiplied, much as Institutes of Correspondence courses have been.

Technical Education :

The Indian Council of Medical Research has proposed that with a view to creating a body of scientific workers trained in primitive and preventive health care, universities should introduce a B. Sc. (Health Science) course. It also raises the question discussed in the State Perspective Health Plan (Vol II No. 9 p 32-35) as to whether for building a good teaching and research cadre, the pay scales of Medical teaching and research staff should not be at the level of the Central Health Services, which would enable the University to enforce the rule that such staff should not have private practice. In February, the All India Institute of Ayurveda was inaugurated at Jaipur. It will bring together education and clinical Ayurvedic facilities, have its own laboratories, libraries, herbal farms, pharmacies and hospitals and finance projects and scholars. It starts with a big botanical garden and library of rare books and manuscripts and a State Directorate of Ayurveda—the only one of its kind in the country.

TV and Satellite Stations :

The Union government announced in February that it is planning TV to cover 80 per cent of the country. The TV programme with a strong rural bias is to give priority to educational and developmental programmes. In Madras, the 175 metre high TV tower was erected in February and now the antenna has to be maintained. The tower will have a power of 10 KV and a range of 80 to 90 km compared to the current 10 range. It is hoped that the tower will be commissioned in April. Also the P and T Department is setting up in Madras an earth station for satellite communication experiments. The experiments will be carried out by the P and T Department using the Franco-German satellite, Symphonie. The station will enable the experts who are being set up at the Telecommunications Research Centre (TRC) to conduct modern telecommunications experiments with the help of the ISRO group at Ahmedabad and the SITE group in Delhi.

Science :

A pilot study in Madras on noise pollution shows that the Anna Salai post office area is serious at 73 decibels (85 decibels is the damaging level), followed by the Central Station/General Hospital area (71 decibels), Kothwal Market area (70 decibels) and Parry's Corner area (69 decibels). Screening and audiogram tests on 10,000 children

attending corporation schools in the city show 8 per cent are hard of hearing—which is on the increase. It is estimated that there are 75,000 deaf and dumb children in the State for whom there are only 22 schools with 2,100 seats. One of the important break throughs reported in February was that the Vikram Sarabai space centre at Trivandrum has succeeded in converting castor oil after chemical tests into fuel oil and will be used as rocket propellant fuel in India's satellite vehicles carrier-3. This also saves the search for this scarce fuel from abroad. With 0.1 per cent of the castor oil produced in the country, self-sufficiency can be achieved in rocket fuel by the country. The space scientists at Trivandrum have also developed a means of converting forest waste into petroleum crude and other products—which could provide employment to one million people and add Rs. 730 crores to our national income. 7 million tonnes of non-edible oil seeds—sal, madhua and neem and others—through chemical processes have been converted into 2 million tonnes of crude, plus cooking gas, industrial chemicals (now being imported at a cost of Rs. 75 crores) and oil cakes. These seeds are found in plenty as forest wastes in UP, MP, Maharashtra and Orissa. The pilot plant went into operation in April 1975 and several such plants could be developed at a total capital cost of Rs. 190 crores and operating expenses of Rs. 461 crores. As profit based plants, the government would earn Rs. 730 crores per annum. Another area where science has helped is in the electronic industry which, with a 20 per cent growth rate this year is at the top of the industrial ladder. 60 per cent of electronics production was in professional electronics and the major electronic centres are dispersed all over the country and have helped the country to attain self-reliance in the field of electronics. Finally a new scheme, the Cement Research Scheme—has been formulated to tackle the five major R and D problems faced by the cement industry: (a) raw materials usage, (b) production processes and operations, (c) manufacture and use of machinery, (d) packing, storage, and distribution and marketing and (e) applications of cement. The scheme, while protecting the consumers' interests, will develop rapidly R and D, bring in qualitative improvements in our R and D and speed up its effective use. This could be a pilot for R and D programmes for other industrial uses.

Health :

At the State level, the government plans to extend the Voluntary Health Service (as recommended 4 years ago by the Perspective Plan) as part of its programme of medical aid to the common man. VHS has launched a Rs. 25 lakh endowment to meet the deficit arising out of the rising costs of drugs, diet, linen etc. Madras City Corporation reports that during 1975-76, 23,282 sterilisations have been completed including 2,020 cases in the first family planning camp at Nammalwarpet. The Maharashtra Chief Minister announced in February that the State government will be introducing legislation in the budget session of the Assembly to make family planning compulsory for all religious communities in the State. Penalties like fines or imprisonment or both will be imposed on those who violate the small family norm. This is a programme of grave importance to all States. The Union ministry of Health also announced in February that it would like to introduce a health insurance scheme in the major cities of the country. On the basis of the experience acquired in ESI

and Union government health scheme, the ministry will divide the community into indigent medical, indigent insurable, and others and select some cities and run pilot projects for low paid employees whose share will be paid by employers. Others can join on payment of the full cost. Simultaneously, a rural health scheme which would club together a group of villages on the basis of Rs. 50 per family is being considered. At the annual conference of the Indian Academy of Pediatrics, a plea was made for a change in medical education to train in community health and clinical research in order to carry medical services to the rural people. There is need for more medical post-graduates to specialise in Pediatrics, and on this basis, the plan to launch an integrated child development project to provide medical care at the door step of the mother and child will be effected.

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V Employment

The State government reports that since the imposition of the President's rule on February 1, all the industrial disputes in the State—25 strikes and 2 lock outs—involving 13,300 workers have been settled during the month and all workers are back at work. Legislation was passed in early February by Parliament requiring prior government approval for any industrial establishment employing more than 300 workers to lay off or retrench workers or close down. The aim of the bill is to maintain a higher tempo of production and avoid hardships to workers. It will have to be implemented, while maintaining discipline so essential to increased production. In February in all parts of the country minimum wages for agricultural labourers were either fixed at between Rs. 3 and Rs. 8 a day or machinery set up for such fixation. The Union government fixed the wages at Rs. 4.45 to Rs. 6.50 a day for areas falling under its jurisdiction. In Andhra Pradesh it is Rs. 3-Rs. 5 per day, Assam Rs. 5-Rs. 6 a day without meals or Rs. 4.50-Rs. 5.50 with one meal, Bihar at Rs. 4.50 to Rs. 5.00 plus breakfast, Gujarat Rs. 5.50 per day, Kerala Rs. 6.50 to Rs. 8 per day, Haryana Rs. 5.50 with meals and Rs. 7 per day without meals, Himachal Pradesh Rs. 4.25 a day, Karnataka Rs. 3.65 to Rs. 5.60 per day, Madhya Pradesh Rs. 3.50 to Rs. 4.00 per day, Maharashtra Rs. 3 to Rs. 4.50 per day, Orissa Rs. 4. per day, Rajasthan Rs. 4.25 to Rs. 5 per day, Uttar Pradesh Rs. 4 to Rs. 6 a day, and Punjab Rs. 4.65 to Rs. 5.65 per day with meals and Rs. 6.70 to Rs. 7.70 without meals. In Tamil Nadu, where the 1973 fixation was Rs. 3 a day for male workers and Rs. 1.75 per day for female workers, a committee has been set up to review and recommend the minimum wages for the different zones in the State. It is important that machinery be developed for enforcing the minimum wages that have been proclaimed, particularly in the period of emergency. Madhya Pradesh reports that it is planning to extend NSS to all college students (against the 16,000 now

enrolled) and to give the 4-5 lakh educated unemployed, work in the irrigation and public works departments. The work that is being provided includes manual work which is welcomed by the unemployed. The Union government has sanctioned Rs. 80 lakhs for tea plantation workers for subsidised housing—Rs. 43 lakhs for West Bengal, Rs. 18 lakhs for Assam, Rs. 14 lakhs for Kerala and Rs. 4 lakhs for Tamil Nadu. ILO reports that in 1975, world unemployment rose sharply—doubling in New Zealand, Switzerland and Luxemburg, increasing by 50 per cent in Belgium, Chili, Portugul, Spain, UK, Australia, Austria, France, Denmark, Japan, Norway, South Asia, Zambia, Germany and by 30 per cent in US, Canada, Spain, Holland and Yugoslavia. It also reports, that mere redundancy did not damp down inflation, nor did longer working hours raise productivity.

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VI Other Items

College day — Tiruchirapalli and Vellore :

February 13 was celebrated as the college day by 4 Tiruchy colleges—Bishop Heber College, Urumu Dhanalakshmi College, Jamal Mohammed College and National College. In addition, Holy Cross College also organised a special function for the day. The occasion was used to discuss and reflect over the quinquennial inspection of all the affiliated colleges by the University, the semester pattern for under-graduate courses for a selected number of affiliated colleges, the grading scheme for post-graduate courses from 1976-77, the change in the structure of the question paper from 1977 March and the building of question banks.

College Days in North Arcot :

In February, 3 colleges in the North Arcot District also celebrated their college days—the Dhanabhagyam Krishnaswamy Mudaliar College where a relatively uneducated car mechanic has devoted his life savings for the development of a women's college and is pursuing his objective to developing it into a full fledged women's college, the Islamiah College, Vaniyambadi, one of the 2 oldest colleges in the district which has developed into an institution of good higher education and the newly started college in Ambur. In all 3 colleges the total curriculum and examination reform package of the University was the subject of discussion and review.

ICSSR :

The ICSSR Research Committee met in February and approved some 20 research projects around the priority themes established by the Council as well as a programme of research fellowship and publication grants. It also approved the programme of visiting professors for 1976-77, including a visit by Prof. Roby Kidd. The ICSSR International Collabora-

tion Committee also met in February and decided on its terms of reference, which is to promote international relations between the Council and other research agencies. In this connection it also reviewed the extent to which it should be dependent on foreign grants for its representational functions. It was generally agreed that this is a priority of the country's own resources.

UGC Grading Committee :

A meeting of the UGC Committee on implementing the grading system was held in February. It was noted that some 35 universities had adopted the grading system in one form or another and the plans of all universities for introducing the scheme for the post-graduate courses from 1976-77 were noted with appreciation. In this connection, the UGC offer of Rs. 5 lakhs to each university implementing the total scheme of examination reforms was noted, and the universities which had not as yet submitted plans for its use were urged to do so.

Indian University Association for Continuing Education :

The Executive Committee of the Indian University Association for Continuing Education met in New Delhi in February and drew up the programme for 1976 as well as the conference programme for 1977. The 1976 programme will range around a 3 day symposium on Adult Education as a discipline to be held in Tirupathi, a workshop on correspondence education to be held at Punjab University, a seminar on refresher training programmes at North East Hill University and a meeting for colleges on adult literacy and community service programmes in Bombay. For the 1977 conference, it was decided to concentrate the theme, professionalisation of Adult Education in India. The one day conference will be held at the Tamil Nadu Agricultural University, Coimbatore.

Tanners Week :

The Annual Leather Fair and Tanners get together was also the occasion for a seminar on the problems of the leather industry, including its export problems. CLRI provided as usual an excellent setting for the events and the seminar discussion helped to clarify the problems connected with the nature of the demand for leather products, the infrastructure needed for implementing the government decision to cut back on raw or semi-finished leather exports, and the means whereby the R and D and training facilities at the Centre could be used for a wider Agro-Asian clientele.

Tata McGraw Hill and International Cultural Fund :

The quarterly meeting of the Tata McGraw Hill Board of Governors was held in February. The major discussion centred around the means of expanding the publishing activity of the company so that it would soon reach the target of Rs. one crore of annual business that it had before it. The occasion was also used to publicise the launching by UNESCO of the International Cultural Fund with an international contribution of $7 million from Iran and Venezuela. The Fund is meant to finance the development of all forms of cultural activities as part of national development.

Andhra Mahila Sabha :

The monthly meeting of the Administrative Committee of the Andhra Mahila Sabha met in February. It welcomed the

return of Dr. Mrs. Nayudamma as Superintendent of the Nursing Home, and reviewed the various arrangements for economising on the functioning of the Nursing Home. It noted the improvements in the children's hospital, the family planning operations and nursing home services generally, and made recommendations to the Trust Board to finance the Home until the Union government grants were received.

Madras Science Association :

The Annual exhibition of the Madras Science Association was organised at Pachaiyappa's College, with the participation in the exhibition of all the science students of the Madras colleges. The Pachaiyappa's college received the award for all round scientific exhibition excellence. The celebrations were used to discuss the place of science in every day life and in particular its relevance to the mass poverty of the country.

Ravi Shankar :

Ravi Shankar, Akbar Ali Khan and Allah Khan gave Madras a memorable concert in mid February in the University Centenary Auditorium. The combination of the sitar, sarodh and tabla by the 3 master creative artists was a unique cultural event in the life of the city and the Sabha which organised the event did all music lovers a great favour.

Lions Club, Nanganallur :

A meeting of the Lion's Club, Nanganallur was held in mid February to review the economy of the world and the country and drew the conclusion that there was a strong case for a major rational division of labour between countries—the rich and the poor. In particular there is a case for the affluent countries dismantling their tariff barriers, under the protection of which they are producing goods and services which can more effectively and cheaply be produced by the developing countries. This would also increase the employment prospects for both groups of countries.

University Events :

Apart from the weekly meetings of the Conveners of Schools and monthly meeting of the Inter-Departmental Council, there were meetings of the National Service Scheme Advisory Committee which drew up programmes for 1976—Youth against Dirt (the cattle problem in Madras) work by commerce students in rural co-operatives, science students on agro-service centres, and all students on non-formal education; meeting of the affiliated colleges committees and the Principals to deal with the additional Rs. one crore intercollegiate facilities programme for the Madras Colleges and the complaints received against the colleges; two meetings of the curricular and examinations reforms committee assisted by a committee on question banks and a meeting of Chairmen of Boards of Studies to finalise its recommendations on grading, change in the structure of question papers, the building of question banks, and the selection of 40 colleges which would adopt the semester pattern for 1976-77. The syndicate met on February 25 and reviewed and approved the programmes of development and reforms planned and proposed by its various committees.

Special Seminar :

The Ninth session of the Special Seminar on "Educational Development in Tamil Nadu" was held on Friday March 26 when Sister Catherine McLevy's paper,

Non-formal Education for the age-group 6-11, was reviewed and approved. The basic problem for this age-group is the irrelevance of the school in relation to the struggle of the young persons and their families for making a living, in light of which there is the need for both an appropriate learning programme and environment and a machinery to execute non-formal education schemes.

March Seminar :

The March Development Seminar met on March 25 to discuss the paper, 'Education in Tamil Nadu', by Mr. Alexander Joshua, Deputy Director of the Institute. The paper, together with a summary of the discussion of the paper under the chairmanship of Mr. J. Ramachandran at the seminar appears as the first article in this issue.

Second Article :

A paper, "The Indian Economy Today", appears as the second article.

Book Review :

A review by Mr. A. Joshua, Deputy Director of the Institute, of the book: "Pills Against Poverty"—a study of the introduction of Western Medicine in a Tamil Village by Goran Djurfeldt and Staffan Lindberg, published by the Scandinavian Institute of Asian Studies—Monograph series: No. 23 (1975), appears in the Book Review Section.

Education in Tamil Nadu

by

ALEXANDER JOSHUA.

" Learning is the true imperishable riches : all other things are not riches "

THIRUKKURAL

I. INTRODUCTION.

'Education' is defined in the UNESCO publication "The educations of adults, a world perspective" as organised communication designed to bring about learning. According to Chambers Twentieth Century Dictionary, education means the bringing up or training as of a child or strengthening of the powers of the body and mind.

Except for treatises on religious philosophy and faith, perhaps the most voluminous literature and the largest number of books on any single subject is on 'Education' All aspects of education—its aims, concepts, methodology, psychology and more recently its economies—have been discussed, written about and thrashed out. But still there are controversial issues. For example:—

a. Punishment as a deterrent or corrective for students is decried by a large majority of people. But in some schools the use of the cane continues. The puzzling aspect of the question is that if the religious and legal formation of society is based on the concept 'Punishment for Offence', it seems logical to teach the child the idea early in life.

b. Memorising is now considered the wrong way to learn. But a developed memory is one of the greatest of assets in all walks of life.

c. Examinations, as existing to-day, as a tool for evaluation of the achievements or abilities of students are not favoured by educationists. The semester system and internal evaluation methods have been suggested as alternatives.

2. EDUCATION.

The image that used to be thrown upon the mental screen of the word 'Education' used to be a building, a number of students, stern teachers, dreaded examinations and much longed for holidays. But the present day world concept is changed. Education is no longer considered as a privilege restricted to children, whose parents could afford it, nor restricted to a school, nor by professional teachers. The right of every

child to education has been recognised. The growing mass of illiterates has now become a great social problem. Education is now conceived as a continuous and life long process. On this basis, there are three demographic sectors in our State whose requirements have to be considered. First the children from about the age of six years. Second the youths and adults who as children never joined school which is small percentage of the population, or those who after joining school discontinued for some reason—and lapsed into illiteracy, which is the largest sector. Third, the literates who wish to continue learning.

The educational process, currently in existence, for the first sector is the formal education that is, education for which the learners are enrolled in the formal education system of schools and colleges, which is the traditional form, fairly well established in the State. For the second sector, the present accepted form is what is termed 'Non-formal' education and adult literacy classes. Non-formal education may be defined as "any organised educational activity outside the established formal system—whether operating separately or as an important feature of some broader activity—that is intended to serve identifiable learning clienteles and learning objectives." The third sector comes under 'Adult Education' (different from adult literacy) which persons who are literates and who no longer attend school on a regular basis undertake organized activities with a conscious intention of bringing about changes in information, knowledge, understanding for solving personal or community problems. Adult education is, therefore, taken to mean those forms of education which are undertaken voluntarily by mature people for development of personal abilities and attitude.

In a short paper like this it is not possible to deal with all the three areas mentioned. Hence the discussion is restricted to the formal education system and the non-formal method and adult literacy in Tamil Nadu.

3. THE FORMAL EDUCATION SYSTEM:

The present established formal education system consists of the school course and the college education. The school system has three stages, namely

Primary School — Standards I to V
Middle Schoel — Standards I to VIII
or
Standards VI to VIII

High School including Anglo-Indian Central Schools etc. — Standards I to XI
or
Standards VI to XI
or
Standards IX to XI

(The Higher Secondary School affiliated to the Central Board of Secondary Education system runs to 11 standards, the XI standard being equivalent to the Pre-University Course.) Full statistical data of the type of schools, number, strength of enrolled pupils in schools are given in Appendix I. The College Course begins with the Pre-University one year, the degree course running to three years and the post graduate course to another two years—with variations in Professional colleges. An extract of the statistical data for colleges and schools is given in Appendix 2, as in 1973.

Based on the provision in the Indian Constitution for free education for children from the age of 1 to 14 years, Tamil Nadu Government has declared education from standard I to the Pre-University course free. The Government has also provided increasing number of educational institutions in the State as may be seen from data given below :-

Primary schools have increased from 25,091 in 1967 to 26,726 in 1973, High Schools from 2,350 to 2,757 and Central and Matriculation schools from 22 to 66, although there has been a reduction in Middle schools from 6,066 to 5,773. Similarly there has also been a large increase in enrolment in classes I to V from 46.34 lakhs, in to 54.37 lakhs, classes VI to VIII from 11.33 lakhs to 14.18 lakhs and in classes IX to XI from 6.07 lakhs to 7.38 lakhs during the period. The number of colleges for general education has increased from 77 (men) and 28 (women) to 127 (men) and 45 (women), colleges in the same period with enrolment increasing from 74,112 (men) and 23,390 (women) to 1,49,092 and 52,161 respectively. There has, however, been a reduction in Training Colleges and Professional Colleges.

But the education system has been, throughout this increased phase of educational establishments, characterised by students dropping out of schools and colleges which in essence leads to wastage. It will be seen from Appendix 3 that out of 8.74 lakh pupils who joined school in 1957-58, only 2.54 lakhs reached standard VIII in 1964-65, 1.66 lakhs standard XI in 1967-68 and 0.24 lakhs the degree course in 1972. Another disquieting feature is that the enrolment of girls in the school stages has been far below that of boys as evidenced by data below:-

Year	Enrolment (lakhs)		Enrolment (lakhs)		Enrolment (lakhs)	
	Boys	Girls	Boys	Girls	Boys	Girls
	(6-11 years)		(11-14 years)		(11-17 years)	
1966-67	27.16	19.19	7.52	3.81	4.27	1.81
1972-73	30.09	23.17	8.88	4.94	4.89	2.36

The students discontinuing school education has been heaviest in the Primary schools as can be seen from the analysis given in Appendix 4. The total number of students dropping out in one year from classes I to IV as seen during the years 1971-72 is 5.62 lakhs of which 2.75 lakhs are boys and 2.87 lakhs are girls. Further out of 13,82,345 pupils who joined class I in 1971, only 7,93,531 reached class V in 1974 showing a drop-out of 5,88,814. These figures do not, however, account for stagnation in various classes for which no data is available separately. The extent of drop-outs and stagnation in college education is not known, as there seems to be no data available.

The statistical data and information reveal the general features, inadequacies and anomalies which characterise the education system.

(i) There is a variety of schools in the State under the nomenclature of Matriculation, Anglo-Indian, Central, Higher Secondary and S.S.L.C. schools. In the contents of the education courses also there is diversity and in the management authorities. The S.S.L.C. examination is conducted by the Education Department, the Matriculation by the University and the Higher Secondary is affiliated to the Central Board of Education. Out of the 172 colleges for general education, 123 numbers are run by private enterprise. However, in the collegiate education there is more uniformity.

(ii) In the State, education up to and including the Pre-University is stated to be free. But there are schools which charge anything from Rs. 10/- to Rs. 25/- and colleges which levy fees from Rs. 25/- to Rs. 50/- per month. The answer to this charge would be that those are private institutions. Admitted. The question arises "if the students now in institutions which charge fees clamour for free education, will the Government provide?"

(iii) According to the 1971 census, 69.74 per cent of the total population of the State live in rural areas, the vast majority of which is engaged in agricultural and allied occupations. If educational institutions are to serve the dominant occupation of the people, then there appears to be real inadequacy. There are only 3 Agricultural Colleges (including a Dept. in a University), one Veterinary College and 98 schools which provide agriculture as an 'elective' subject in the higher forms. It would, perhaps, be pertinent to add a query whether the Agricultural and Engineering Colleges have attempted to design a better sickle or hoe for the farmer.

(iv) Again statistical data for literacy in the State shows that as in 1971 the literacy percentage is only 39.45 leaving 60.55 percent of the population illiterate. Our Universities do not seem to have diverted their attention to this social problem. Even if they do not enter into the direct activity of providing learning opportunities to the illiterates, there is room for research and investigation into all aspects of illiteracy.

(v) For all appointments in Government services and in private enterprises, certain minimum qualifications are prescribed. If education is to provide not merely learning but skills for employment, then there is room for re-orientation of educational courses to develop the required manpower in the State.

(vi) Accomplishments like knowledge of music, painting, Home Science etc. are accepted to be those which girls should possess. The number of schools that offer Home Science and Drawing and painting are 3 and 9 respectively. There are few colleges which offer Home Science and Music courses.

(vii) The outstanding problem in schools particularly is that of stagnation and drop-outs. However, there is one point to be considered in this connection. The total number of students in classes I to V as in 1973 (see Appendix 5) is 54.37 lakhs (30.64 lakh boys and 23.73 lakh girls). Supposing the problem of stagnation and drop-outs is eliminated, then it has to be verified whether there is provision for all these students in our Middle and High Schools. As matters stand, the total enrolment in classes VI to VIII is only 14.18 lakhs and in classes IX to XI it is only 7.38 lakhs. This point regarding the accommodation available in the higher classes, does not seem to have been verified in relation to the enrolment in the Primary Schools. Unless the capacities of schools are known, this cannot be clarified.

4. ADULT LITERACY:

Illiteracy is a world problem with varying intensity and gravity in different countries. The common feature of most of the countries where the problem exists is that although the percentage of illiteracy has fallen, the total number of illiterates has increasad. India and Tamil Nadu are no exception to this trend. Among the States in the Indian Union, Tamil Nadu

holds the second highest literacy percentage rate, next to Kerala, since 1961—the *literacy* percentage being 31.41 in 1961 and 39.45 in 1971. The percentage of literates to the total population as in 1961 and 1971 for the 14 districts of the State is given in Appendix 6. It will be seen that Madras city has the highest literacy both among male (70.58) and female (52.50) population, while Dharmapuri has the lowest in both sectors, 31.66 and 12.60 respectively, in 1971. It will also be noticed that in all cases the literacy percentage of males is higher than that of females. Further there appears to be certain geographic contiguity in poor literacy rates as the districts of Salem, Dharmapuri, South and North Arcot have poor literacy percentages. The other major *features of literacy in the State* (which indirectly reflect the state of illiteracy) are: The percentage of literacy in all districts for urban areas is higher than that of the rural areas, the State percentage being

	Persons	Males	Females	Persons	Males	Females
		Urban			Rural	
Tamil Nadu (1971)	56.78	67.46	45.50	31.83	44.68	18.97

The literacy among scheduled castes and scheduled tribes is far below the general standard of the State. As per 1961 census out of a total scheduled caste population of 60.67 lakhs only 8.89 lakhs are literates, giving a percentage of 14.66. Similarly for scheduled tribes out of a total population of 2.51 lakhs only 0.15 lakhs are literates, showing a percentage of 5.91. According to age groups, both in the urban and rural areas, the highest literacy among *males is among* the 15 - 34 age group and for females among the 5 - 14 age group.

These figures indicating literacy would naturally give the extent of illiteracy which is the second problem of study in this paper.

5. SUGGESTIONS FOR REFORM OF THE EDUCATION SYSTEM.

In planning and designing programmes for change and reform in education, one has in the first instance to locate the principal sectors of society to be benefitted. *lay down the aims and define objectives* with reference to the levels concerned (namely Primary, Secondary, College); establish priorities, take into consideration the concepts on which reforms are to be based and design the structural, administrative and methodological changes required, with an eye on financial resources available.

From the population point of view, it *will be seen from* Appendix 7 that the age-group 0-14 is the biggest section of the population. To this if the 15-24 group is added it forms the population for which the formal education has *initially* to cater for. It is seen that out of a population of 411.9 lakhs (1971) the age groups 0-14 and 15-24 together form 191.3 *lakhs.* The major proportion of the population (287.3 lakhs) live in rural areas and 124.6 in urban areas, and the age-group up to 24 in rural areas is 132.9 lakhs and in urban areas 58.4 lakhs. Therefore we are concerned with about 46.4 per cent of the population in the education business and investment.

The defective aspects of our education system seem to be :-

1. The failure to clearly define the general objectives and for each level, and if it has been defined the failure to achieve the objectives.

2. The failure to hold the children within the system, particularly in the school stage and,

3. The failure to orient the courses for creation of manpower resources required for agricultural or industrial occupations or self-employment—the exceptions being the professional colleges and technical schools.

The visible symptoms and manifestations of these failures are the drop-outs or students leaving educational institutions, repetition or stagnation, a large number of educated unemployed and the increasing number of illiterates.

The objectives of the system of Education, Science and Technology in the State have been defined in the Task Force Report of the State Planning Commission, "Towards a Learning Society", as follows :

Development of the personality of the child and its discrete and harmonious growth as a member of a group bearing on its affective life and work experience ;

Understanding of the culture and history of the State, the country and the world ;

Instruction in the moral and spiritual values of the country ;

Acquistion of scientific, technical and professional skills ;

Promotion of research to push back the frontiers of knowledge and solve the technical and developmental problems faced by the State and the Country ;

Democratisation of education, through meeting the growing demand for education, and provision of social compensation for the condition of the poor majority of the State's population.

This statement actually codifies the general aims and ideals for education. What is required is a clearer statement of objectives for each stage, Primary, Secondary and College, which would be the extent of learning and skills the students should achieve.

The failure to retain pupils in educational institutions results in wastage because school facilities which have been established and which should be used to create higher levels of literacy and manpower are not utilised. Secondly drop-outs ultimately lapse into illiteracy and swell the ranks of illiterates.

The failure to orient the education courses to meet the demands of agriculture and industry results in unemployment and lack of required manpower for economic development.

The two principal concepts for reform are that education should not be merely for teaching of existing knowledge and information but it should be to acquire ability to learn to keep abreast with the changing world. Changes in Indian society has been precipitated by the attainment of freedom and the consequent

necessity to preserve it, the rapid expansion of population and the explosion of knowledge in science and technology.

1. Objectives :

(a) Primary stage. In defining the objectives of primary education one significant fact to be realised is that this stage is, perhaps, the most important educational level both from the point of view of the individual and the State for two reasons. Firstly, this is the stage where all children are likely to attend school *and, perhaps, the only course of education* the vast majority of them will ever attend, in the existing socio-economic conditions. Secondly primary education provides the children the opportunity for acquiring the basic skill for future learning. In Thirukkural it is stated that letters and numbers are the two eyes of man. Primary education, therefore, must ensure literacy and numeracy.

(b) Middle School: This is an intermediate stage in the school system. The pupils may be of the age group of 11 to 14 years and may not yet be ready to acquire skills for employment. During this stage of education, provision of study should be aimed at providing an opportunity to continue general education or to diversify to some technical course in the high school.

(c) High School: The vast majority of high schools now provide only general education. *Diversification at this stage* to a greater extent than available to-day is necessary so that a student leaving school may have some particular skill for employment. *Diversification has been* introduced in the present system through the opening of engineering courses in 143 schools, of secretarial courses in 120 schools, of agricultural courses in 63 schools and of home science courses in 26 schools. Larger number of schools could introduce science subjects as electives in classes X and XI. Alternatively any one craft like book-binding, radio repairing, sewing etc., can be introduced in schools, *as followed in the Higher Secondary* Schools. This would ensure lower level manpower required.

(d) University and College courses : The University of Madras is a teaching cum affiliating University and its functions are teaching, research, non-formal education, publications and documention and additional educational activies. The affiliated colleges also have similar functions. But higher education should aim **not only at the advancement of know-**ledge and teaching of that knowledge, but also in training highly skilled man-power needed for economic and social development. For this purpose a wider variety of subjects of study like management, marketing, advertising, farm management etc. have to be provided in the degree and post-graduate courses of study. Further, in designing research there should be liaison with all economic activities and government departments as necessary. At present such needs for research work is mainly attended to by private institutes. As early as 1971 the Madras Institute of Development Studies, under the leadership of Dr. Malcolm S. Adiseshiah, arranged a "Consumer-user oriented research" seminar at the Presidency College, *in co-operation with the* ICSSR New Delhi. This idea could be further pursued.

2. Curriculum :

According to its Latin origin, 'curriculum' is a 'runway', a course where one runs to reach a goal. Therefore, in educa-

tion it describes the ground or course which the pupil and teacher cover to reach a goal or an objective. The essence of the curriculum should be to achieve the objective. What has to be remembered in this connection is that with the rapidly changing and expanding frontiers of knowledge in science and technology, the relevance, of any curriculum will be short lived. Therefore 'flexibility' should be the essence in designing curriculum and each unit or stage in education should have a built-in mechanism to effect the change in curriculum when required. In this connection the value of physical education and drill may be emphasised. Wrapped up in the soldier's physical training is the central motive of making him alert, fit and obey commands. Similarly some physical exercises should be designed, particularly in the school stage, to teach discipline, alertness and physical fitness.

The NCERT has brought out a graded curriculum for the ten-year school. The Tamil Nadu counterpart SCERT could take up the adopting of this curriculum for the needs of the State.

3. Wastage in Education:

A sustained effort has yet to be made to study the problem of drop-outs and stagnation, on a State basis. There are some studies from sample surveys and of districts. For this purpose an elaborate system of maintaining cards for each student has to be organised. The studies made generally emphasise 'poverty' as the main cause for drop-outs in the State. The Tamil Nadu government has introduced some ameliorative measures in this regard. In 1973, about 18 lakhs of pupils from standard I to VIII were provided with free mid-day meals. Free books and slates were provided to the beneficiaries of the mid-day meal scheme who are students of standards I to III.

4. School structure:

The eleven year school period is to be changed to ten years with Pre-University course changing to two years. It is suggested that school structure should be as shown below:

Primary School:	Standards I to IV
Middle School:	Standards V to VII
High School :	Standards VIII to X

Reducing the number of school classes to ten would result in one class being free. This class should be used as Pre-Primary class in which pupils from 4 years to 5 years could be accommodated. This would serve the dual purpose of educating children at any early age and also improve the subsequent attendance in school.

Because of the present inadequacies, particularly in school education, resulting in discontinuance by students, unemployment etc, there is a tendency to pass the judgment on the formal education system as a complete failure. Further, non-formal education as more adequate for the purpose of education, if not as an alternative is now being widely proclaimed. It should, however, be remembered that the Tamil Nadu Government has been successful in establishing educational institutions and in appointing the required number of teachers for enrolling nearly 95 per cent, if not more, of children in the primary stage. Therefore, energy and efforts should be put in to revitalise the formal education system and non-formal education should be to meet the existing needs of illiterates and semi-literates.

5. Teaching the illiterates

"Thus illiteracy rates of 70 per cent and 35 per cent might be regarded as two critical points in the progress of literacy. If the illiteracy rate in a country is about 70 per cent or over, one cannot generally expect a decrease in the number of illiterates; but once the rate drops below the 35 per cent level a decrease in the number can be expected" Literacy 1967-69, UNESCO. So this is the norm to which efforts have to be directed in considering the question of illiteracy. (1951) The literacy rate in Tamil Nadu was 20.8 which had increased to 31.14 and 39.39 in 1961 and 1971 respectively, which is against a population growth rates of 11.85 and 22.31 in the decades of 1951-61 and 1961-71.

Several methods have been developed to teach the illiterates the art of reading and writing. The Mysore State Adult Education Council for teaching reading and writing of Kannada selects the most common letters in the language or those which can be easily written or those which can be grouped together on the basis of similarity. On this basis a primer is designed with 6 similar letters on a page and some pictures and consists of 30 characters of the alphabet. This primer is intended to be completed in 13 hours. Reader 2 introduces the vowels and conjunct consonants and contains words and sentences and is expected to be completed in 63 hours. The Bengal Mass Education Society for Bengali uses a rather unique method as it begins teaching reading and writing from symbols used, a rather unique method as it begins teaching reading and writing from symbols used in arithmetic. As the numerals emanate from 'O' (zero) the letters are also said to emanate from 'O'. The primer in this method for both language and arithmetic are intended to be taught in 75 hours with 2 hours of teaching every day. Out of the two hours, one hour is general information. The method commonly known as 'Laubach' method, named after its author Dr. Frank C. Laubach, uses the basic theory that the students are able to recall to memory the shape of a letter if it resembles the shape of an object.

The present accepted methods of teaching illiterates and semi-literates are mainly:- Functional literacy and Non-formal education method. The ingredients of a functional literacy programme are that it must be work based, it must help the illiterate to participate effectively in the social and political life of the country and it must impart skills of reading, writing and arithmetic. The Khadi and Village Industries Commission, through its 'Peoples Education Programme' has successfully introduced a functional literacy course for the illiterate spinners in their Rural Textile Centre. The six spindle metallic charka is the tool with which the spinners earn their living. Consequently the charka is their tool for learning also. The first book for learning introduces the charka with its picture and picture of its parts and names. Small sentences are gradually taught about this tool. The second primer deals with the institution which provides the work. The third and fourth books complete literacy education. The Tamil Nadu Board of Continuing Education has in its report "Towards a Functional Learning Society" surveyed 134 ongoing schemes for non formal education in Tamil Nadu involving 5.68 lakh people, covering Adult Literacy Centres, Farmer's Functional Literacy Centres, Tutorial colleges etc. A pilot project on the basis of the recommendations has been opened in Mylapore.

It has been found by evaluation of adult literacy courses that the illiterate can reach a state of adequate literacy by learning 600 to 800 words mainly centred around his environment.

The major problems besetting programmes in adult literacy is that of finance, accommodation and teaching hands. It is not possible for any government solely to undertake either directly or through agencies financed by it to arrange for means of educating the illiterate population. Hence the help and co-operation of Voluntary Agencies is necessary.

The crisis in education and its particular symptom of mass illiteracy has outgrown the pre-occupation of educational planners to become a matter of public concern throughout the world. A wide variety of strategies and varying types of establishments and organisations exist in the battle against illiteracy. The target to which any endeavour should be directed is to teach a 70 per cent literacy rates. This would mean teaching of 600 to 800 words to the illiterates occupying, perhaps, 200 to 300 hours. It will be seen from Appendix 6 that the only population sectors which has reached this target is the male population of Madras City, with a close second in the Kanyakumari male sector. It has been realised and accepted that illiteracy is much more than an educational problem. The relationship of illiteracy to various aspects of human rights and dignity, its role as a productive factor for development in industry, agriculture and commerce and man-power required and its significance in social and political progress have become the concern of educationists, economists and planners.

The following suggestions are made:-

1. The government should co-ordinate all the present voluntary work in adult literacy and non-formal education to be more purposeful on the basis of the recommendations made by the Board of Continuing Education.

2. All industrial establishments should be directed to liquidate illiteracy among their employees in a prescribed period of time.

3. In every district one or two schools should arrange for evening or night classes for illiterates with the help of student volunteers, particularly in Salem, Dharmapuri, North Arcot and South Arcot where the literacy percentage is very low.

4. A ' Literacy Day ' may be observed throughout the State to infuse enthusiasm in the programme.

5. Mass media like radio and television may be used on an organised basis for the purpose. The psychological factor that enters into educating illiterates is that there should be some motivation. For this propaganda would be essential.

Conclusion :

To plan provisions for meeting the educational requirements of children and adults one must first have a clear and realistic conception of the minimum essential learning needs. The assertion that a child has a right to learn and that an illiterate should be educated has no meaning unless the 'right' and 'necessity' are translated into practical terms—terms of some "minimum package of attitude, skills and knowledge. Despite the diverse needs and environment, in more general terms the package should be literacy and numeracy, knowledge and skills for earning a living, knowledge for operating a household, knowledge for civic participation and positive attitudes towards learning, co-operation with fellow men towards national development.

APPENDIX I

STATEMENT SHOWING THE NUMBER OF INSTITUTIONS, PUPILS AND TEACHERS IN VARIOUS TYPES OF EDUCATIONAL INSTITUTIONS IN TAMIL NADU AS ON 1-8-1973.

	No. of Institutions	No. of Pupils			Number of teachers.		
		Boys	Girls	Total	Men	Women	Total
High Schools :							
Indian High Schools : Boys	2,276	1,019,411	231,005	1,250,416	44,940	7,456	52,396
Girls	441	730	298,327	299,057	143	10,394	10,537
TOTAL	2,717	1,020,141	529,332	1,549,473	45,083	17,850	62,933
Anglo-Indian High Schools :							
Boys	20	11,445	2,634	14,07	185	257	442
Girls	20	1,935	11,636	13,571	12	460	472
TOTAL	40	13,380	14,270	27,650	197	717	914
Matriculation Schools	24	10,167	12,249	22,416	112	770	882
Indian School Certificate	9	1,933	1,736	3,669	49	149	198
Central Schools	9	5,388	2,888	8,276	163	194	357
School affiliated to Central Board of Secondary Education	24	10,742	4,804	15,546	206	469	675
TOTAL	66	28,230	21,677	49,907	530	1,582	2,112
GRAND TOTAL	2,833	1,061,751	56,5279	1,627,030	45,910	20,149	65,959

APPENDIX 1/2

STATEMENT SHOWING THE NUMBER OF INSTITUTIONS, PUPILS AND TEACHERS IN VARIOUS TYPES OF EDUCATIONAL INSTITUTIONS IN TAMIL NADU AS ON 1-8-1973. *|contd|*

	No. of Institutions	Number of pupils			Number of Teachers		
		Boys	Girls	Total	Men	Women	Total
Middle Schools							
Boys	5,764	1,279,135	932,378	2,211,513	36,712	30,057	66,769
Girls	5	171	1,116	1,287	2	34	36
Anglo-Indian Primary	4	739	442	1,181	2	36	38
TOTAL	5,773	1,280,045	933,936	2,213,981	36,716	30,127	66,843
Primary Schools	26,726	2,132,253	1,626,887	3,759,140	67,408	38,924	106,332
GRAND TOTAL FOR GENERAL EDUCATION	35,322	4,474,049	3,126,102	7,600,151	149,934	89,200	239,134
Pre-Primary Schools (Girls)	37	2,090	2,301	4,391	...	135	135
Pre-Basic Section	21	533	533	1,066	3	20	23
TOTAL		2,623	2,834	5,457	3	155	158

excluding the strength in Stds. I to III of Pre-primary schools and including the strength of Pre-primary stage in Matriculation Indian School Certificate and Central Board of Secondary Education Schools.

APPENDIX 1/3

STATEMENT SHOWING THE NUMBER OF INSTITUTIONS, PUPILS AND TEACHERS IN VARIOUS TYPES OF EDUCATIONAL INSTITUTIONS IN TAMIL NADU AS ON 1-8-1973. /contd ../

	No. of Institutions	Number of Pupils			Number of Teachers		
		Boys	Girls	Total	Men	Women	Total
Other Education							
Oriental High Schools	16	1,816	733	2,549	126	25	151
Oriental Middle Schools	1	6	...	6	3	...	3
TOTAL	17	1,822	733	2,555	129	25	154
Schools for the Handicapped							
Blind	9	481	151	632	48	21	69
Blind and Deaf	2	374	281	655	1	68	69
Deaf and Dumb	9	974	526	1,506	76	83	159
Orthopaedic	2	11	17	28	...	2	2
Leper	4	66	29	95	13	3	16
TOTAL	26	1,906	1,004	2,916	138	177	315
Training Schools							
Men	57	1,710	...	1,710	286	3	289
Women	57	...	1,710	1,710	3	270	273
TOTAL	114	1,710	1,710	3,420	289	273	562
Reformatory and Jail	17	2,352	704	3,056	116	65	181
Musci Schools	3	14	85	99	17	17	34
Adult Schools	14	260	72	332	13	1	14
Industrial Schools	1	25	283	308	12	...	12
TOTAL	35	2,651	1,144	3,795	158	83	241

APPENDIX 2

UNIVERSITY EDUCATION (1972—73)

Sl. No.	Institutions	Number	Enrolment	Teachers	
1.	Universities	4	—	—	
2.	Colleges for General Education (Arts & Science) Men	127	1,49,092	7469	Extract from Tamil Nadu.
	Women	45	52,161	2667	Economic Appraisal,
3.	Training Colleges	23	3,225	—	1973.
4.	Colleges for Professional education				
	Medical Colleges	10	9,887	—	
	Agricultural Colleges	3	1,244	—	
	Law College	1	2,106		
	Veterinary College	1	894	—	
	Engineering Colleges	12	11,026	—	
	Polytechnics	35	7,952	—	
	Technical Arts & Industrial Schools	107	17,916	—	
		Schools education (1973)			
5.	High Schools	2823	16,27,030	65,959	Includes Anglo Indian, Central schools etc.
6.	Middle Schools	5773	22,13,981	66,843	Extract from unpublished
7.	Primary Schools	26,726	37,59,140	1,06,332	statistical data from D. P. I., Madras.

APPENDIX 3

Year	Standard	No. of students enrolled in lakhs.
1957-58	I	8.74
1961-62	V	4.22
1964-65	VIII	2.54
1967-68	XI	1.66
July 1968	P.U.C.	0.59
July 1968	Teacher training and other post S.S.L.C. Course	0.20
1972	B.A., B. Sc. B. Com. (graduation)	0.24

Source : Table 1.14 Two from 'Towards a Learning Society'.

APPENDIX 4

STANDARDWISE STRENGTH OF GIRLS IN INSTITUTIONS OF GENERAL EDUCATION

	I	II	III	IV	V
1-8-71	6,23,751	5,41,683	4,50,154	3,62,068	2,91,627
1-8-72	6,26,584	5,51,811	4,60,353	3,75,710	3,02,328
1-8-73	6,30,128	5,64,473	4,75,737	3,88,762	3,14,217
1-8-74	6,44,438	5,69,121	4,87,594	4,02,162	3,24,346

Drop outs from 1/8/71 to 1/8/72 class I to II — 6,23,751—5,51,811 = 71,940
11.5 percent

Drop outs from 1/8/72 to 1/8/73 class II to III — 5,51,811—4,75,737 = 76,074
13.7 percent

Drop outs from 1/8/73 to 1/8/74 class III to IV — 4,75,737—4,02,162 = 73,575
11.2 percen.

STANDARDWISE STRENGTH OF PUPILS IN INSTITUTIONS FOR GENERAL EDUCATION

	I	II	III	IV	V
1-8-71	13,82,345	12,10,915	10,37,978	8,71,581	7,30,759
1-8-72	12,37,567	12,37,567	10,61,018	8,93,647	7,47,591
1-8-73	13,93,425	12,62,270	10,92,085	9,20,119	7,69,708
1-8-74	14,20,230	12,77,473	11,18,286	9,50,895	7,93,531

Drop outs from 1/8/71 to 1/8/72 class I to II — 13,82,345—12,37,567 = 1,44,778
10.6 percent

Drop outs from 1/8/72 to 1/8/73 class II to III — 12,37,567—10,92,085 = 1,45,482
11.7 percent

Drop outs from 1/8/73 to 1/8/74 class III to VI — 10,92,085— 9,50,895 = 1,41,190
12.9 percent

Source: Unpublished data from the D. P. I.'s office

STANDARDWISE STRENGTH OF BOYS IN INSTITUTIONS FOR GENERAL EDUCATION

	I	II	III	IV	V
1-8-71	7,58,594	6,69,232	5,87,824	5,09,513	4,39,132
1-8-72	7,59,727	6,85,756	6,00,655	5,17,937	4,45,263
1-8-73	7,63,297	6,97,797	6,16,348	5,31,357	4,55,491
1-8-74	7,75,792	7,08,352	6,30,692	5,48,733	4,69,185

Drop outs from 1/8/71 to 1/8/72 class I to II — 7,58,594—6,85,756 = 72,838
9.6 percent

Drop outs from 1/8/72 to 1/8/73 class II to III — 6,85,756—6,16,348 = 69,408
10.1 percent

Drop outs from 1/8/73 to 1/8/74 class III to IV — 6,16,348—5,48,733 = 67,615
10.9 percent

Source: Unpublished data from the D.P.I., Madras.

APPENDIX 5

STANDARDWISE STRENGTH OF PUPILS IN INSTITUTIONS FOR GENERAL EDUCATION AS ON 1-8-1973 AND THE PERCENTAGE OF GIRLS TO TOTAL STRENGTH

STANDARDS	BOYS	GIRLS	TOTAL	PERCENTAGE OF GIRLS TO TOTAL STRENGTH
1.	2.	3.	4.	5.
I	763,297	630;128	1,393,425	45.2
II	697,797	564,473	1,262,270	44.7
III	616,348	475,737	1,092,085	43.5
IV	531,357	388,762	920,119	42.2
V	455,491	314,217	769,708	40.8
TOTAL	3,064,290	2,373,317	5,437,607	43.6
VI	368,974	212,909	581,883	36.5
VII	297,298	166,635	463,933	35.9
VIII	243,312	129,547	372,859	34.7
TOTAL	909,584	509,091	1,418,675	35.8
IX	197,309	97,202	294,511	33.0
X	166,871	81,075	247,946	32.6
XI	132,707	63,409	196,116	32.3
TOTAL	496,887	241,686	738,573	32.7
GRAND TOTAL	*4,470,761	3,124,094	7,594,855	41.1

* Including the strength in Standards I to III of Pre-Primary Schools.

Source: Unpublished data from D.P.I., Madras.

APPENDIX 6

PERCENTAGE OF LITERATES TO TOTAL POPULATION

STATE/REVENUE	PERCENTAGE OF LITERATES TO TOTAL POPULATION					
	1961			1971		
DISTRICT	Persons	Males	Females	Persons	Males	Females
TAMIL NADU	31.41	44.54	18.17	39.45	51.77	26.86
MADRAS	59.47	69.61	48.22	62.01	70.58	52.50
CHINGLEPUT	27.89	40.21	15.06	39.7	51.7	27.02
NORTH ARCOT	24.72	37.12	12.19	34.66	47.55	21.39
SOUTH ARCOT	26.71	40.55	10.65	31.13	44.06	17.8
DHARMAPURI	15.70	23.68	7.46	22.31	31.66	12.60
SALEM	22.14	32.75	11.35	31.7	42.67	20.32
COIMBATORE	30.20	43.28	16.66	38.89	51.32	25.9
THE NILGIRIS	35.68	48.27	21.92	47.03	58.48	34.9
MADURAI	33.38	48.12	18.62	41.51	55.06	27.76
TIRUCHIRAPALLI	29.93	44.69	15.30	37.5	51.21	23.67
THANJAVUR	33.55	48.67	18.65	39.6	53.09	26.13
RAMANATHAPURAM	32.11	48.34	16.79	39.7	54.71	25.37
TIRUNELVELI	36.38	49.99	23.46	44.83	57.13	33.02
KANYAKUMARI	48.57	56.24	40.73	58.21	64.11	52.13

Source: Unpublished data from D.P.I., Madras.

APPENDIX 7

POPULATION ACCORDING TO BROAD AGE GROUPS (1971)

Names of the District	Age Groups	Males	Females	All persons
TAMIL NADU				
	TOTAL	20,828,021	20,371,147	41,199,168
	0-14	7,861,605	7,700,435	15,562,040
	15-19	1,841,390	1,752,567	3,593,957
	20-24	1,771,510	1,761,518	3,533,028
	25-29	1,576,320	1,777,276	3,353,596
	30-39	2,801,685	2,811,961	5,613,646
	40-49	2,279,575	2,048,673	4,328,248
	50-59	1,490,194	1,355,665	2,845,859
	60+	1,203,959	1,161,531	2,365,490
	Age not stated	1,783	1,521	3,304
RURAL	TOTAL	14,438,727	14,295,607	28,734,334
	0-14	5,510,363	5,404,685	10,915,048
	15-19	1,234,662	1,152,691	2,386,753
	20-24	1,145,922	1,165,436	2,311,358
	25-29	1,059,567	1,239,210	2,298,777
	30-39	1,918,173	2,007,845	3,926,018
	40-49	1,597,047	1,490,054	3,087,101
	50-59	1,083,844	997,758	2,081,602
	60+	888,521	836,830	1,725,351
	Age not stated	1,228	1,098	2,326
URBAN	TOTAL	6,389,294	6,075,540	12,464,834
	0-14	2,351,242	2,295,750	4,646,992
	15-19	607,328	599,876	1,207,204
	20-24	625,588	596,082	1,221,670
	25-29	516,753	538,066	1,054,819
	30-39	883,512	804,116	1,687,628
	40-49	682,528	558,619	1,241,147
	50-59	406,350	357,907	764,257
	60+	315,438	324,701	640,139
	Age not stated	555	423	978

Summary of Discussion

At the discussion of the paper at the Seminar held in the Seminar room of the Institute on Thursday, 25th March, 1976, under the chairmanship of Prof. J. Ramachandran, Principal, Presidency College, Madras, the author commenced his presentation with the observation that 'Education' had inspired a large volume of literature and sparked off controversies. A clear statement of objectives for various stages of the educational system was an essential pre-condition for its restructuration. The educational structure as originally designed by the British, with English as the medium of instruction, had the objective of providing trained manpower to function in the lower echelons of their administrative organisations. The most recent statement of objectives is contained in the State Planning Commission, Task Force Report, 'Towards a Learning Society', with emphasis on personality development, inculcation of moral and cultural values and the development imperatives of science and technology. The content of the present system has been geared neither to the earlier pragmatic approach nor to the development of human potential approach enunciated in the Task Force Report. The objectives of education should spell out, as far as possible, the information and skills an individual can acquire at different levels. In recent years the concept of educational clientele has been transformed. What was previously the preserve of the privileged, has now been accepted as the right for every child to be educated. Another socio-economically disadvantaged sector, for whom some special programmes of education are necessary, is the large and increasing number of illiterates, belonging to every age-group and living for the most part in rural areas. The third group is the literate and educated minority who wish to develop their skills and improve their knowledge. The first sector is taken care of by the formal education system in schools and colleges. Education programmes for illiterates and drop-outs could be co-ordinated through non-formal education schemes. The third group's demand for continuing education can be met through planned expansion of the activities of the existing institutions of higher learning such as the Universities. A review of the statistical data and particulars of the existing school system in the State, shows a variety of streams—the S.S.L C. and the Matriculation schools, the Anglo-Indian Schools, the Higher Secondary schools in which standard XI is equivalent to P.U.C., Central schools etc—with diversity in syllabi even for equivalent examinations. Of these, the large majority are government and government aided free schools. According to State policy education up to Pre-University is free. Despite an escalating rate of establishment of schools and higher enrolment of student, a disquieting feature has been the massive drop-out rate, particularly at the primary level. The enrolment of girls at all stages has been very low. Other areas of discussion and analysis pinpointed are : viability of completely free education, regulation of private schools, provision at school and college levels to meet the requirements of rural students, action oriented research on problems such as drop-outs, job oriented education courses etc. Our adult literacy targets should aim at a 65 to 70 per cent literacy rate, which is the transition point after which the total number of illiteratas would begin to drop as per UNESCO computations. This would require a knowledge of 600 to 800 words by individuals, the time estimated being about 200 hours. In implementing this programme of non-formal education, the main thrust would

be by voluntary agencies and welfare organisations. A number of instruction programmes and teaching methods have been developed to meet the needs of this sector. As regards reform measures, if these are to be effective and relevant, then a precise definition of objectives at various levels and a systematic investigation besetting the formal system is an essential first step.

During the discussion that followed, it was observed that the basic purpose of education is the development of the individual and perfection of knowledge. The linking of education with employment as in the system designed by the British for India has left a legacy of distortions, including a spurious social status, for the English educated minority. The problem of educated unemployment is a function of the absortive capacity of the economy which in turn is derived from decisions which are primarily political and economic in nature A comment was made that the paper contained several themes for fruitful discussion. Even though education is a basic tool of civilization, its aims and objectives are dynamic rather than static being determined by the structural needs of society as a whole. A specific example is the increasing importance of chartered accountants in business and finance organisations with the growing complexity of the tax structure in the country. In referring to the conceptual analysis of education it was pointed out that such an exercise presents some terminological problems. An adequate definition should make a distinction between education as learning and the infrastructure sustaining this process, that is, distinguishing between the capacity to internationalise relationships and events stimulating the formation of ideas and the institutional frame, buildings, teachers, libraries, laboratories etc. Regarding objectives, in establishing these, it should be borne in mind that the overall objectives are set by the educator and the parent, not forgetting that education itself is an abstraction- Reference was made to the efforts being made to enrich the school system by including work experience and pre-vocational skill formation, over and above the diversified schools. The manual and technical skills inculcated should be basic and situation specific depending upon whether the milieu was rural or urban. Intensive vocationalisation and diversification could follow after ten years of schooling at the +2 stage, but work experience should be a component of education up to the first degree level, as visualised by the Gandhian model. As regards the drop-outs, as pointed out in the Tamil Nadu State Planning Commisssion, Task Force Report on Education, these are chiefly a manifestation of poverty and the problem posed can be resolved only as progressive plan implementation makes a dent on poverty levels. The assumption that knowledge could be equated exclusively with literacy was questioned. Those without writing and reading skills have well developed capacities and aptitudes for which there is no facile measure. Concerning drop-outs as many of them got absorbed into economic activity the wastage was only partial. People with educational qualifications who did not use them were also wasting their education. An understanding of the historical process in educational development could also be of some help in formulating objectives at specific stages. The opinion was expressed that work experience would instil a healthy respect for the dignity of manual labour. Another important ingredient in successful education is the capacity of the teacher to hold the interest of the students and contribute

to psychological stability. Moreover, modern child psychology indicates that punishment had no place in the disciplinary structure being in effect a confession of failure.

The education cost factor was an important issue in view of our resource constraints and required careful consideration. In this context it was pointed out that there was no detailed study of the composition of drop-outs and a national survey was an imperative from the point of policy formation. The ultimate purpose of all education, whatever shape it took, should be directed to stimulate creative ability, logical thinking, planning and action.

The Indian Economy Today*

Growth Indicator :

Despite its admitted limitation as a measure of the welfare of society and the State, the rate of growth of the economy is used to indicate the state of the economy. The limitation arises from the fact that the GNP (whose growth is being measured) is an aggregation of a heterogeneous collection of goods and services, added up in value terms, the value-price itself being a function of the demand for the goods and services, based in turn on a highly skewed distribution of incomes.

Measured by GNP growth, it is disturbing that the Indian economy shows both a secular stagnation trend and a declining trend today. GNP has grown over the last two and a half decades at the rate of 3 per cent (compound) per annum, which is bad in relation to the target of 5-6 per cent, but is even worse in per capita terms, which allowing for a population increase of 2.5 per cent per annum, has meant on annual increase of 0.5 per cent. GESO now tells us that for the Fourth Plan, the annual average, GNP growth was 2.8 per cent and per capita 0.5 per cent. For 1973-74 the GNP growth was 3.1 per cent in 1960-61 prices and per capita of 0.7 per cent. (These real rates should be compared with the [current prices] 24.5 per cent and 21.7 per cent referred to in the Union Government's statement on the Decade of Progress—which is a reflection of the inflationary impact suffered by the economy in 1973-74.) For 1974-75 the Reserve Bank of India estimates a GNP growth of 1.6 per cent and per capita regression of —0.7 per cent. For 1975-76, I estimate a GNP growth of 3-4 per cent and a per capita growth of 0.5 to 0.9 per cent. The World Bank warns us that if present trends continue we are likely to end the Fifth Plan with a per capita minus growth rate of at most at an average over the seventies of 0.2 per cent. Whatever may be one's view of the limitation of the GNP growth measure with which I started, whatever may be the marginal shifts in the actual against the estimated rates, the overall conclusion is that the economy is performing poorly.

Some Bright Spots :

Where do we start to improve its performance?

First, thanks to good monsoons, the food grains position this year will be good at around 114 million tonnes. This is a much needed respite which should be seized upon to build for the future.

Second, inflation has been contained and we enjoy the distinction of being the only country which through somewhat drastic demand management measures has been able to stabilise prices at the high levels reached in the inflationary years 1973-74.

* Extracts from a talk by Dr. Malcolm S. Adiseshiah to Rotary Club—Central, Madras, on January 27, 1976.

Third, we have a sound industrial structure, with a Rs. 6,000 crores public sector investment which seem to have turned the corner and is doing well, with a comprehensive and sophisticated private sector able to meet all consumer and most capital goods needed.

Fourth, we have currently a good foreign exchange position with nearly Rs. 1,000 crores in such assets, a somewhat comforting situation against the deteriorating term of trade and growing trade deficit.

Some Dark Spots:

As against these strong points, there are some serious weaknesses in our ecomomy:

1. First, at present on only 20 per cent of the 33 million hectares of permanently irrigated land is more than one crop grown. Again at least 15 per cent of the annual agricultural output is lost through spoilage due to poor storage, through rodents and pests and through bad milling and transport.

2. Second there are recessionary trends that are spreading in some key sectors—textiles, automobiles, sugar, construction, consumer, durables and engineering goods. Incidentally when the government itself has admitted that there is recession in some sectors and has launched on the six point package (relaxing building restraints and providing Rs. 10 crores to HUDCO, providing another Rs. 10 crores to increase public transport and stimulate bus production, and other actions on the textiles, jute backing, other consumer durables and capital market,) the continued debate on whether there is recession seems to be beside the point. Production has fallen by 5.6 per cent in yarn and 12 per cent in cloth, by 40 per cent in cars, 16 per cent in jeeps and 10 per cent in auto-rickshaws, in sugar by 20 per cent, in construction by 15 per cent and similarly in engineering goods and chemicals.

3. Third, there is the decline in savings and capital formation. The secular trend is for an increase in household savings from 68 to 80 per cent of the total savings, for a decline in public sector savings from 23 per cent to 15 per cent and a fall in private corporate sector savings from 8.6 to 3.7 per cent. This has resulted in increasing the savings-investment gap which today stands at around 500 crores and which is met by our draft on foreign savings. This we euphemistically call aid.

4. Fourth, our balance of payments deficit for this year is reaching alarming proportions. Already in the first 9 months of this year, April to December, it is over Rs. 1,000 crores, which is about equal to all of last years's deficit, which was Rs. 1,060 crores. I am afraid it is somewhat late to take corrective action for this year for which I estimate a deficit of Rs. 1,300 to 1,400 crores.

5. Finally, unemployment, under-employment and the deterioration in rural levels of living are becoming serious. I have analysed the data from 4 sources—the RBI's Rural Debt and Assets Survey for 1970-71, the 25th round of the NSS, the Tamil Nadu Economic Appraisal for 1975 of the State Government, and the Economic Monitoring Service of the Commerce Research Bureau. I am publishing the disturbing results in my Institute's Bulletin and the Swarajya.

Some Needed Short-Term Actions :

There are actions that should be taken now to break out of our stagnation.

The most immediate action is in regard to our major industry, agriculture, to provide it with the farm management and the farmer education inputs needed so that the 80 per cent unused irrigation capacity is reduced to 10 or 15 per cent and the past harvest losses from various forms of spoilage cut back to 2 to 3 per cent. We should use the breathing space offered to us by the record food grains harvest this year to take this corrective action which is more important than extending the hectarage under irrigation which we are, under the 20 point programme, proposing to do over 5 million hectares.

Second, there is need to intensify the selective reflationary package to counter recession in not only the 5 sectors selected by the governments but also in the chemical, engineering goods and other consumer goods sectors. Also Rs. 1,500 crores of black money which has now been declared under the Voluntary Disclosure Scheme is only the tip of the iceberg and should by various incentives be channelled back as investment into these lagging sectors.

Another front on which action should now be taken for results in our next financial year is a promotion of our exports programmes. It is truly scandalous that less than 1.2 per cent of our GNP is being exported at a time when GSP is being adopted by the major industrialised countries, including at long last the U.S. This export expansion is not only a means of closing our foreign exchange gap; if it is the result of the dismantling of the tariff and non-tariff barriers by the rich countries, it will mean their industries moving in to sophisticated production areas leaving the labour incentive manufacturers to India and other Third World Countries, and so increasing employment by 3 to 4 times for every one person shifted from these industries by those countries.

There is also the urgent need for increase in savings by both the public sector, for which on the basis of their performance there is some hope now, and also by the private corporate sector. The government's non-plan and non-development expenditure needs to be under constant review—not only when there is a national crisis. Similarly the private sector must impose on itself certain disciplines to increase its savings and capital formation capacity.

On the fiscal side, there is need for a government decision at least to stabilise excise and corporate taxes at their present high levels for the balance of the Fifth Plan period. I do not expect a lowering of excises—except in some specific cases as part of an export promotion function or demand stimulation ad hoc action. But the introduction of some degree of medium term certainty in the level of excises is a necessary condition for the business and industry to break out of their stagnation.

Finally, in relation to the growing problem of unemployment and under-employment which the agricultural intensification will in part help, a planned rural works programme to add to the productive assets needed by SFDAs, MFALs, and DFDAs can also generate short term and long-term accelerating employment opportunities.

BOOK-REVIEW

Book: Pills Against Poverty

A study of the introduction of Western Medicine in a Tamil Village.

By

GORAN DJURFELDT AND STAFFAN LINDBERG.

Published by the Scandinavian Institute of Asian Studies Monograph Series-No. 23 (1975).

The monograph is the result of a case study carried out in Thaiyur Panchayat, Chingleput District, 20 miles South of Madras for the Swallows in India, a charity organisation, which is a secular offspring of the Emmaus movement based in Sweden and Denmark, which is running an aid project in the village. The authors Goran Djurfeldt and Staffen Lindberg, attached to the Universities of Copenhagen and Lund respectively have studied South Indian Society for several years and have published other articles in Indian and Scandinavian journals.

The book is published with another volume by the same authors entitled "Behind Poverty"—the social formation in a Tamil village. There are ten chapters in the monograph: Introduction, Theoretical perspectives, Thaiyur Panchayat—a short presentation, the disease panorama, Poverty and disease, Allopathic medicine, Folk medical knowledge and practitioners of indigenous medicine, Reasons for the survival of indigenous medicine, Family Planning and Conclusion: where medical technology fails.

This case study is on the health and health policies in a Tamil village, Thaiyur with the perspective which can be presented in the authors' words "People eat less, have fewer clothes and worse houses, and live in an increasingly polluted environment. As a consequence they grow weaker and more susceptible to 'tropical' disease. No amount of doctors and primary health centres can avert this trend". It is stated that the relation of health to economic and social processes was almost forgotten and health problems were defined as technical problems, rather than political and economic ones. The study is developed on three theses namely (i) the health situation in the village is a consequence of the economic and political order, (2) the health problem cannot be solved by means of medical technology—either the Western allopathic technology or the existing indigenous health services; and (3) only a transformation of the economic and political structure can give the people the means to improve their health. Although this is the main theme the authors have made an excellent in-depth study of the socio-economic structure of the village, describing its geography, economic infrastructure, education, administration etc. The village has been surveyed for information on mortality, causes of death, ages at death among children and adults etc. and also for income distribution, nutrition, sanitation, conditions of work and hygiene. The existing Public Health Services which is mainly the allopathic

system has been described. The role of the indigenous medical practitioners like the **Vaithiyan** and the midwife, *specialists like snake-bite curers and the* category of "religious medicine" like the **Manthravathi**, god dancers and exorcists have been pictured. 26 per cent of the survey respondents consult only the indigenous medical practitioners while 16 per cent resorted to both systems. The illustrative case studies reveal the attitudes of the villagers to diseases and medical care.

Some of the conclusions would be of use for policy decisions: (1) "Evidently, *the small resources that India can afford* to invest in medical care could be much better used if they were shared between the allopathic and the indigenous systems. Money could then be spent on the training of the indigenous body of practitioners, and in creating an optimal division of labour between the systems." The need for utilising existing facilities and talents are very often forgotten. (2) The family planning programme in Thaiyur is a failure *because the economic structure is such* that it forces them to have more children so that one or two may survive

There is, however, one aspect of allopathic medicine which seems to have been overlooked. Medicines in the broad sense have not only the curative potential but also the preventive. Even in economically *backward villages, preventive medicines* have proved useful. The success in controlling smallpox in India is an example. The book should prove useful to all planners of medical policies in villages and a good model for research workers. Education of children through the formal *school system and the adults through mass* media in personal and environmental hygiene should find a place in medical policies.

A. Joshua

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